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STOCK FUND OPERATIONS
IN THE DEPARTMENT OF DEFENSE

April 1985

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Executive Summary

STOCK FUND OPERATIONS IN THE DEPARTMENT OF DEFENSE

Changes in the conditions under which the five DoD stock funds manage repair parts and general support items have made obsolete the traditional methods of evaluating the funds' requirements, budgets, and performance. In FY85, the stock funds plan to procure repair parts and general support items amounting to approximately \$12 billion.

One of the changes is that a Congressional appropriation is now required for any expansion of peacetime inventory to support force growth or modernization or improvements in readiness. Other changes are: significant increases in requirements, new surcharges for inventory maintenance, the emergence of budget additives, new pricing policies to balance customer budgets, and expansion in the categories of items managed by the stock funds.

Although the five stock funds operate under a common DoD policy, each is unique in its organizational structure and methods of financial and inventory management, making the task of evaluation even harder. The solution is to adopt a common set of stock fund management indicators that will transcend the changes and the differences among the funds.

We recommend indicators that will cover the three basic categories of stock fund operations: requirements, inventory, and financial and supply performance. Generally expressed as ratios, these indicators are not affected by price changes and shifts in demand patterns and are applicable to all the stock funds. They should be tracked over a period of years to reveal trends and place other changes in perspective. The following are examples of the proposed indicators.

An indicator in the requirements category is the ratio of total demand-based requirement objectives to total demand. This figure will show whether gross requirements are growing faster or more slowly than experienced or projected demand. If the ratio increases, a review of more specific requirements-to-demand indicators will isolate the causes of change and determine the validity of stated requirements.

An indicator in the inventory category is the ratio of inventory for which requirements no longer exist to total inventory. This ratio will flag potential problems in demand projection or disposal policy, both of which influence budget evaluations.

An indicator in the performance category is the ratio of unfilled orders to gross orders. Trends in this measure of supply performance will demonstrate whether the stock funds are doing better or worse at providing their customers with supply support.

We submit the following recommendations to the Assistant Secretary of Defense (Manpower, Installations and Logistics): (1) for budget evaluations, adopt the proposed management indicators; (2) for computation and tracking of the indicators, establish a data base that includes at least 5 years' worth of information spanning at least three budget submissions; and (3) for the information needed to compute the proposed management indicators, expand and standardize the stock fund budget data submitted by the Services and the Defense Logistics Agency.

By applying the three types of indicators together, DoD will improve significantly its ability to validate stock funds requirements, evaluate stock fund budgets, and assess performance.

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indicators for evaluating stock fund requirements and budgets are recommended in the three basic areas of stock fund operations: requirements, inventory, and financial and supply performance. The indicators are defined and evaluated in the context of a thorough descriptive overview of current (FY82-FY86) stock fund operations for repair parts in the Army, Navy, Air Force, and Defense Logistics Agency.

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1. INTRODUCTION

STOCK FUNDS IN THE DoD

Stock funds are revolving funds that sell various items of supply to Department of Defense (DoD) customers and from those sales obtain cash for replenishing their stocks and continuing operations. The DoD operates five separate stock funds: one in the Defense Logistics Agency (DLA) and one in each of the four Services. Major customers pay for materiel out of their operations and maintenance (O&M) and military personnel appropriations and industrial fund accounts. The stock funds also sell to other DoD stock funds, to other (non-DoD) government customers, and to foreign governments through Foreign Military Sales trust funds.

Stock fund procurement of peacetime replenishment stocks is not funded by Congressional appropriations. Instead, the stock funds operate with obligational authority approved within the Executive Branch by the Office of the Assistant Secretary of Defense (Comptroller) and the Office of Management and Budget. However, the stock funds do require appropriations for the purchase of two other kinds of inventory: war reserve stocks and stocks that qualify as peacetime inventory augmentation. Under the latter category, which was first defined in 1982, the stock funds must seek appropriations for their net requirements for any new or additional stocks needed to support force growth and modernization, modification programs, and readiness improvement initiatives.

The stock funds finance a wide range of commodities including fuels, clothing, food, commissary items, medical and dental supplies, and hardware repair parts and spares. The hardware category includes consumables,

field-level reparable, and in the case of the Navy stock fund, depot-level reparable.

The stock funds were established to finance materiel pipelines and inventory at the retail and wholesale levels in the DoD supply system that exist above the consumer (user) levels. This financing is accomplished through two different basic arrangements -- vertical stock fund divisions and horizontal stock fund divisions. Vertical divisions employ a single funding entity to finance both wholesale and retail supply levels combined. Horizontal divisions restrict their financing to one level of supply only, either wholesale or retail.

This report generally addresses only those wholesale and retail stock fund operations concerned with consumable and field-level-reparable repair parts and spares and general support items. The exceptions are the retail divisions in the Army stock fund, which include in their budget requests requirements for not only hardware and general support items but also requirements for other types of stock-funded commodities such as food and fuel. Table 1-1 lists all of the divisions in the Army, Navy, Air Force, and DLA stock funds including both the divisions addressed in the report and, in parentheses, the divisions not addressed. (Although not addressed in the report, there is also a Marine Corps stock fund.)

Overall more than 3.5 million line items are managed in the stock funds, which requested a total of more than \$43 billion in obligational authority for FY85. The stock fund categories covered in the report account for approximately \$12 billion in FY85 obligational authority.

TABLE 1-1. WHOLESALE AND RETAIL STOCK FUND DIVISIONS ADDRESSED

SUPPLY LEVEL	ARMY	NAVY	AIR FORCE	DLA
Wholesale Only (horizontal)	Six Inventory Control Points (ICPs) under Major Subordinate Commands within Army Materiel Command (AMC): AVSCOM, CECOM, MICOM, TACOM, AMCCOM, TROSCOM	(Publication and Forms-Budget Project 15)	-	Supply Centers Defense Construction Defense Electronics Defense General Defense Industrial (Defense Personnel) (Defense Fuels)
Retail Only (horizontal)	Five retail divisions in Major Commands: FORSCOM, TRADOC, USAEIGHT, USAREUR, WESTCOM, (USARJ) (AMC-Installations Division) (Defense Supply Service Washington) (U.S. Army Commissary Resale Division)	Fleet Material Support Office - BP-28 (Bulk Fuels - BP-38) (Resale Commissary - BP-21) (Advance Procurement for Ship Overhaul Material - BP-23)	General Support Division (Commissary) (Fuels) (Medical-Dental) (Air Force Academy Store)	(DLA Support)
Combined Wholesale and Retail (vertical)	-	Shipboard Consumables - BP-14 Aeronautical Consumables - BP-34 (Shipboard Repairables - BP-81) (Aeronautical Repairables - BP-85)	Systems Support Division	-

PROBLEM AND OBJECTIVE

Evaluations of stock fund requirements and budgets are complicated by factors both internal and external to the funds. Internally, structural differences among the funds are reflected in budget submissions, making each fund's requirements unique and precluding comparison with requirements of the other stock funds. Externally, substantial changes in both the nature and size of stock fund requirements have occurred. Finally, in the face of both structural differences and growing requirements, the data to support evaluation of stock fund budget requests have been steadily decreasing. These factors have combined to make stock fund budget evaluations substantially more difficult than they have been in the past.

This report reviews stock fund operations and recommends methods to improve evaluations of stock fund requirements and budgets. It includes descriptions of the stock funds that can serve as a framework for reviews of requirements in the future and recommends a specific set of management indicators for evaluating stock fund budgets.

The next section provides more details on the three problem areas noted above: structural differences, changes in requirements, and the decrease in usable data. A clear view of what has been happening in the stock funds is needed to understand the extent of the evaluation problem and what must be done to solve it.

PROBLEMS IN EVALUATING REQUIREMENTS AND BUDGETS

Structural Differences

Although all the stock funds operate in compliance with DoD policy,¹ the Services and DLA have each developed unique organizational, financial, and

¹Department of Defense, "Regulations Governing Stock Fund Operations." DoD Directive 7420.1 (Washington, D.C.: Department of Defense, January 1967).

inventory management mechanisms for conducting their stock fund operations. These different mechanisms generally reflect reasonable responses to differing missions, operating methods, and command interfaces, and DoD stock fund policy is sufficiently broad to accommodate them. Thus, while there are certain fundamental similarities in the way the stock funds operate, there are enough variations to make each stock fund unique. These differences in structure and operating characteristics carry over into requirement statements and budget requests. As a result, basic and important budgetary terms such as "wholesale demands," "retail sales," and "supply availability" mean different things within each stock fund, and each budget request must be evaluated on its own terms. Cross-fund comparisons will almost always be "apples and oranges" in nature.

The budgets of the wholesale divisions reflect the unique organizational structures adopted by DLA and the Services for their wholesale stock fund operations. The Army, Navy, and DLA submit separate stock fund budgets for each of their commodity-oriented Inventory Control Points (ICPs), while the Air Force submits a single, consolidated budget covering all six of its ICPs. The budgets of the retail divisions are also unique. The Navy's Fleet Material Support Office and the Air Force's General Support Division both submit a single, consolidated retail budget for the hardware and general support item categories covered by this report, while the Army submits nine retail budgets segmented by Major Command and covering all types of stock fund commodities.

Beyond these organizational differences at the wholesale and retail levels, there are deeper structural differences, which are most pronounced in the area of wholesale/retail interfaces.

The Navy and the Air Force include retail-level requirements for the items they manage in their wholesale budget submissions. In this sense the Navy and the Air Force are "vertically integrated" -- their wholesale divisions finance both wholesale and retail levels for the items they manage. Under this system, the Navy and the Air Force transfer (rather than sell) items to retail supply points within their stock funds. The Army system is not vertically integrated. The Army wholesale divisions do not finance retail levels for the items they manage, nor do they include retail level requirements in their wholesale budget submissions. The Army wholesale divisions sell (rather than transfer) materiel to the Army retail divisions. DLA is wholesale only -- it neither finances nor maintains retail levels for the items it manages. As the Navy and Air Force include retail requirements in their wholesale budgets, while the Army and DLA do not, statements of requirements, demands, inventories, and sales have different meanings from one wholesale budget to the next.

Structural differences also exist among the retail divisions. As noted above, the Army retail divisions buy Army-managed items from the Army wholesale divisions. Accordingly, they include requirements for Army-managed materiel in their retail budget requests. The Army retail divisions also finance the full range of stock-funded materiel in their budgets (i.e., hardware items, fuel, food, medical supplies, subsistence, etc.). The responsibilities of the Navy and Air Force retail divisions are not as broad. The Navy's Fleet Material Support Office (FMSO) and the Air Force's General Support Division (GSD) are responsible for financing only hardware and general support items (e.g., clothing), and then only those items managed outside their parent Service (e.g., by DLA, the General Services Administration (GSA), or another Service). These differences make data in retail budget submissions

concerning requirements, demands, inventories, and sales very different from one retail budget to the next.

The situation for both wholesale and retail budgets is complicated further by other structural differences beyond those already mentioned. For example, even though they are both vertically integrated in the sense described earlier, the Navy and Air Force stock funds employ different methods of financial and inventory management at both the wholesale and retail levels (e.g., the Navy has two echelons of supply in many of its retail stock fund operations while the Air Force stock fund has only one retail supply echelon), and these differences are again reflected in budget submissions.

The Army's Direct Supply Support (DSS) system provides another example. Under DSS the Army directly supplies using customers from wholesale inventories, but these sales are "washed" financially through the Army retail divisions. The retail divisions do not record DSS demand for purposes of building levels, nor do they maintain inventory levels for DSS customers. Thus, the Army retail divisions will display requirements and sales for DSS operations in their budgets, but will not include the corresponding demand and inventory levels that normally accompany such data in other stock fund budgets.

These are key examples of significant structural differences among the stock funds, which make each stock fund budget submission unique. Appendix A discusses these and other similarities and differences among the stock funds in greater detail. The unique character of each stock fund is not the only factor complicating budget evaluations, however. Even when examined individually, stock fund budgets are difficult to evaluate for two more reasons: changes in requirements and lack of budget data.

Changes in Requirements

Probably the most significant contributor to the evaluation problem has been the increase in the size of the stock funds. Peacetime requirement objectives for stock-funded repair parts and spares have grown from \$11 billion in FY79 to more than \$23 billion in FY84.² This growth is not the result of any single cause. Rather, it is the combined result of escalating prices, increases in customer demand, expansion of wholesale and retail levels, increases in requirements for nondemand-based inventory (including initial and follow-on provisioning for force growth), increases in numeric stockage objective (NSO) levels, and growth in additive programs. Because it cuts across all aspects of stock fund operations, the growth has made it much more difficult to answer the traditional budget evaluation questions of whether requirements are valid and in balance.

In addition to the problems caused by growth, the last three years have seen the introduction of new types of stock fund requirements, which have complicated evaluations even further.

Peacetime inventory augmentation stocks are the first of the new requirements. In response to Congressional direction, beginning with the FY83 budget submissions, the stock funds have been required to separately identify all requirements for new or additional stocks to support force modernization, modification programs, and readiness improvement initiatives. Once identified, these "peacetime inventory augmentation" requirements are submitted as a separate part of the traditional request for obligational authority (OA), but with funding to be provided by Congressional appropriation. In the past, such requirements were embedded in normal (OA-supported)

²John F. Olio, et. al., Secondary Item Inventory Growth, Memorandum Report ML401, (Bethesda, MD: Logistics Management Institute, June 1984).

recurring and nonrecurring requirements lines, and separate evaluation was not required. In fact, standardized methods for identifying and evaluating inventory augmentation requirements are still not fully established. In 1984, for the first time, the Services were required to submit (as part of their FY86 budget requests) their net (as opposed to gross) inventory augmentation requirements, to reflect the offsetting effect of cash collections from the sale of augmentation stocks obtained in prior years.

A second set of new requirements complicating stock fund evaluations are budget additives such as the Navy's "cost of doing business" and the Air Force's "reorder level deficit additive." These additives are mechanisms for increasing obligational authority to cover unforeseen variations in demand. Sorting out these new requirements, which have involved hundreds of millions of dollars, has required a level of analysis heretofore unnecessary in traditional budget evaluations.³

In the area of financing, a new surcharge for "inventory maintenance" is now appearing in some stock fund budgets. Although subject to different interpretations and defined differently from one stock fund to the next, the surcharge is designed to generate sufficient cash to cover potential cash-flow problems related to unforeseen demand variation and "inventory churn."

Lack of Data

Compounding the budget evaluation problems caused by structural differences among the funds and requirements that are growing in both size and number is the fact that less information is being submitted in the stock fund budgets. Evaluations of stock fund requirements and budgets have

³Kelvin K. Kiebler, Replenishment Budget Additives, Memorandum Report I (Bethesda, MD: Logistics Management Institute, December 1984).

traditionally been based on data in standard forms submitted by the Services and DLA containing the results of their Central Secondary Item Stratification (CSIS) process. (The CSIS is the standardized, DoD-wide methodology for identifying and prioritizing gross requirements and applying assets to compute net requirements.) The CSIS data, along with inventory transaction reports and stratified transition statements spelling out additives and other adjustments to the CSIS, provide the basic data needed for budget evaluations. Under current budget guidance, submission of much of this information is no longer required, and without it budgets have become more difficult to evaluate.

CONTENTS OF THE REPORT

The objective of this report is to provide a framework for evaluating stock fund requirements and to recommend a set of management indicators for evaluating stock fund budgets. To be useful in evaluating requirements, a framework must consist of an overview of the nature of stock fund requirements, the categories into which they fall, and their relative size and scope. For the reasons discussed earlier, it is virtually impossible to obtain such an overview directly from the information in the budget submissions alone. To provide a framework, therefore, we have extracted information from a variety of sources (including the FY85 and FY86 budget submissions) and presented it in formats designed to provide an overview of stock fund operations.

Chapter 2 and Appendices A and B contain these overview descriptions of the stock funds. Chapter 2 graphically displays selected summary information across all the funds based on data drawn from the FY86 budget submissions. Appendix A presents detailed descriptions of the similarities and differences among the funds, expanding on the earlier discussion in this chapter. In Appendix B, more detailed descriptions are presented in outline form for each

of the funds, incorporating data from the FY85 budget submissions and other sources.

Chapter 3 presents the set of management indicators recommended for reviewing stock fund budgets. The indicators are designed to enable the Office of the Secretary of Defense (OSD) to track and evaluate underlying trends in stock fund requirements, inventories, and performance, regardless of changes in prices and demand patterns. Values for the indicators for each fund are displayed in graphic form for FY84 through FY86 based on data in the FY86 budget submissions.

2. STOCK FUND OPERATIONS

INTRODUCTION

This chapter presents overview information on Army, Navy, Air Force, and DLA stock fund operations for the wholesale and retail divisions covered by the report. It addresses:

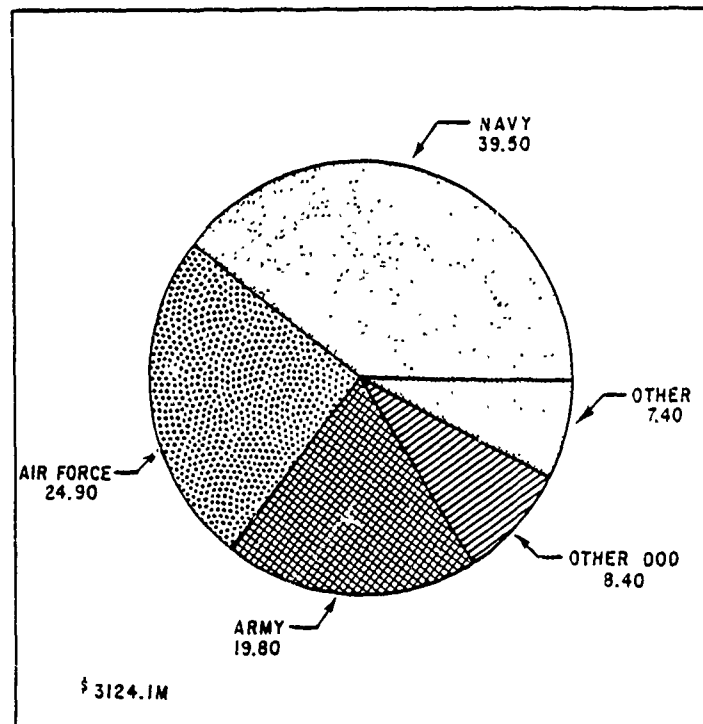
- Wholesale division sales projected for FY86;
- Retail division sales projected for FY86;
- Net obligational authority requests for FY86;
- Inventory augmentation funding requests for FY86;
- Wholesale supply performance in FY84;
- Items managed by Component as of FY84; and
- Gross, recurring-demand-based requirements for FY86.

The overview is based on data in the FY86 column of the FY86 Budget Estimate Submissions (BESs) for the stock funds. The information is presented in graphic form (pie charts and bar charts) and includes identification of specific data sources in the budget documentation in those cases for which data were provided. The charts and data in this chapter, in conjunction with the more detailed descriptions of the stock funds in the appendices, provide an overview of the nature of stock fund requirements.

WHOLESALE SALES

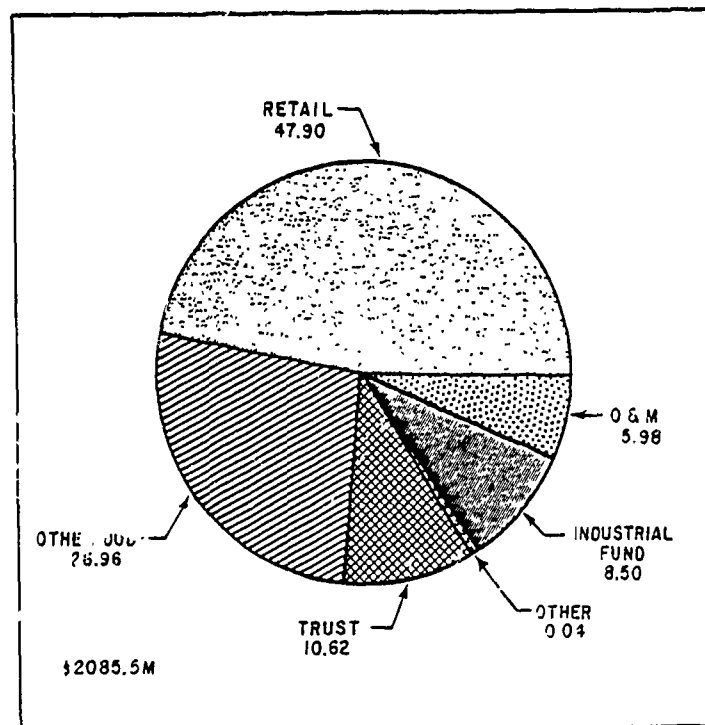
Figures 2-1 through 2-4 depict projected sales for the DLA and Service wholesale stock funds in FY86. With the exception of the DLA display (Figure 2-1), sales are segmented by customer-funding sources, which are similar across the Service stock funds. In the case of DLA, sales are shown by Service. The sales labeled "OTHER" in the charts reflect projected sales to customers outside the DoD.

FIGURE 2-1. DLA WHOLESALE SALES



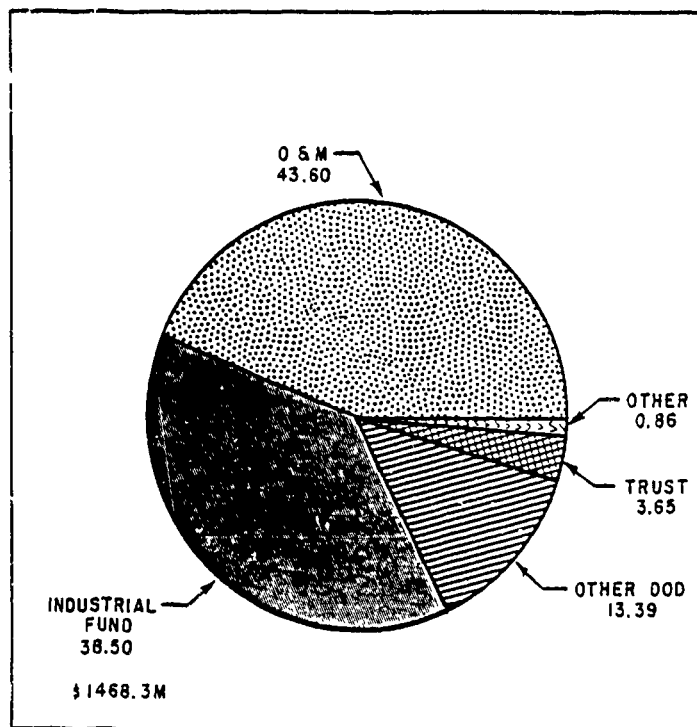
SOURCE: FY86, DOD stock fund budget submission, Standard Form 6 (SF-6).

FIGURE 2-2. ARMY WHOLESALE SALES



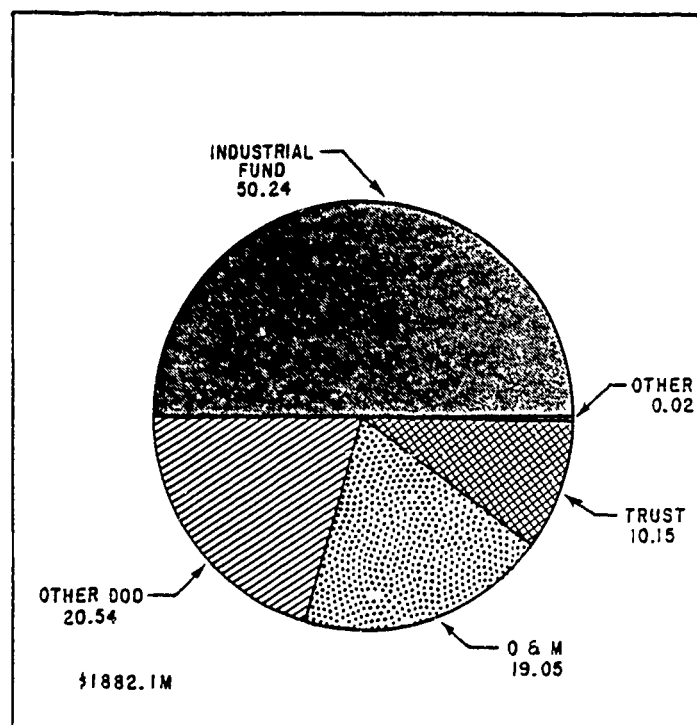
SOURCE: FY86, DOD stock fund budget submission, Standard Form 6 (SF-6).

FIGURE 2-3. NAVY WHOLESALE SALES



SOURCE: FY86, DoD stock fund budget submission, Standard Form 6 (SF-6).

FIGURE 2-4. AIR FORCE WHOLESALE SALES



SOURCE: FY86, DoD stock fund budget submission, Standard Form 6 (SF-6).

As shown in Figure 2-2, nearly half of the Army's annual wholesale sales are to its retail divisions. A portion of these sales (for example, approximately 50 percent of the projected FY85 sales to the Forces Command (FORSCOM) retail division) are to customers in the Army's Direct Supply Support (DSS) system described in Chapter 1. These DSS sales appear as sales to the retail divisions because they are "washed through" the retail divisions in the Army's billing and financial accounting system. That is, DSS customers receive their materiel directly from the Army wholesalers, but pay the retail divisions for it (through a local retail division office), and the retail divisions in turn pay the Army wholesale division.

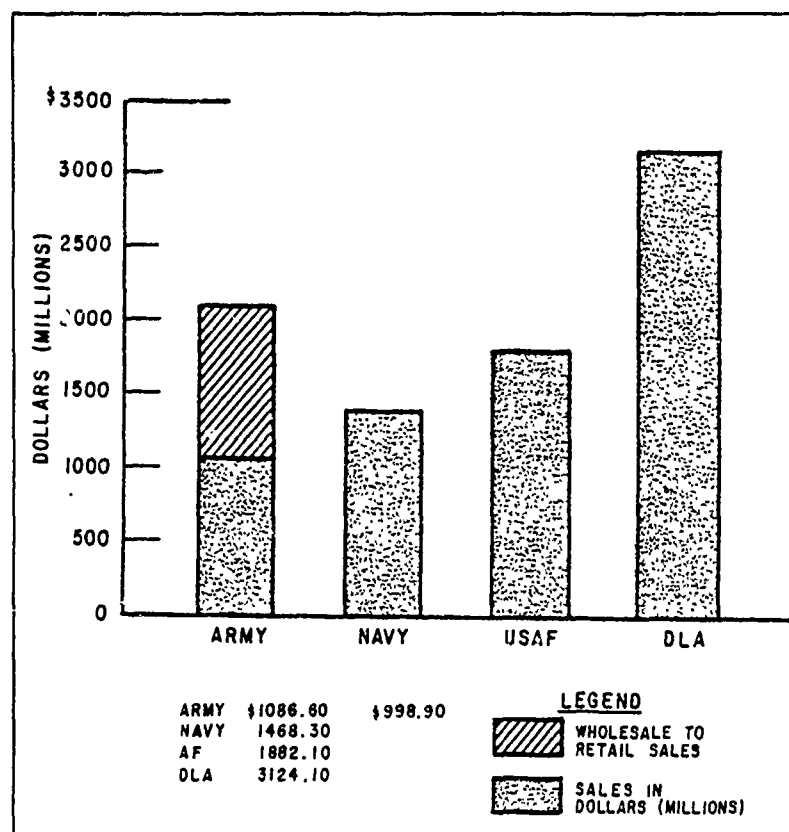
The Navy and Air Force wholesale stock funds, depicted in Figures 2-3 and 2-4, both show large sales to the O&M accounts and the industrial funds. Since the Navy and Air Force are both vertically integrated in the sense that their wholesale divisions finance and maintain both wholesale and retail levels for the items they manage, O&M sales in Figures 2-3 and 2-4 reflect sales of both retail-level and wholesale-level stocks to customers. In comparison, the Army sales data in Figure 2-2 reflect a smaller percentage of sales to O&M. This is because wholesale sales to DSS customers appear as sales to the retail divisions.

As a further example of how basic data elements can have different meanings from one stock fund budget to the next, Navy and Air Force transfers from wholesale to retail for the buildup of retail levels are not sales, and their value does not appear in Figures 2-3 and 2-4. Army sales for buildup of retail levels are included in the Army wholesale sales to the retail stock funds, and their value is included in Figure 2-2.

Figure 2-5 depicts total sales projected for FY86 in the four wholesale stock funds. The cross-hatching in the bar for the Army is a reminder of the

noncomparability between Army wholesale sales and those of the other three stock funds.

FIGURE 2-5. TOTAL FY86 WHOLESALE SALES

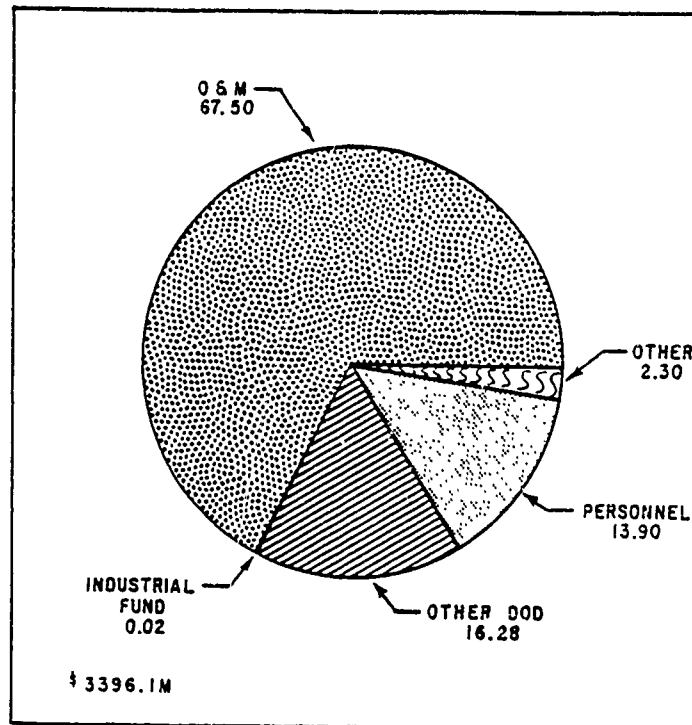


SOURCE: FY86, DoD stock fund budget submissions, Standard Form 6(SF-6).

RETAIL SALES

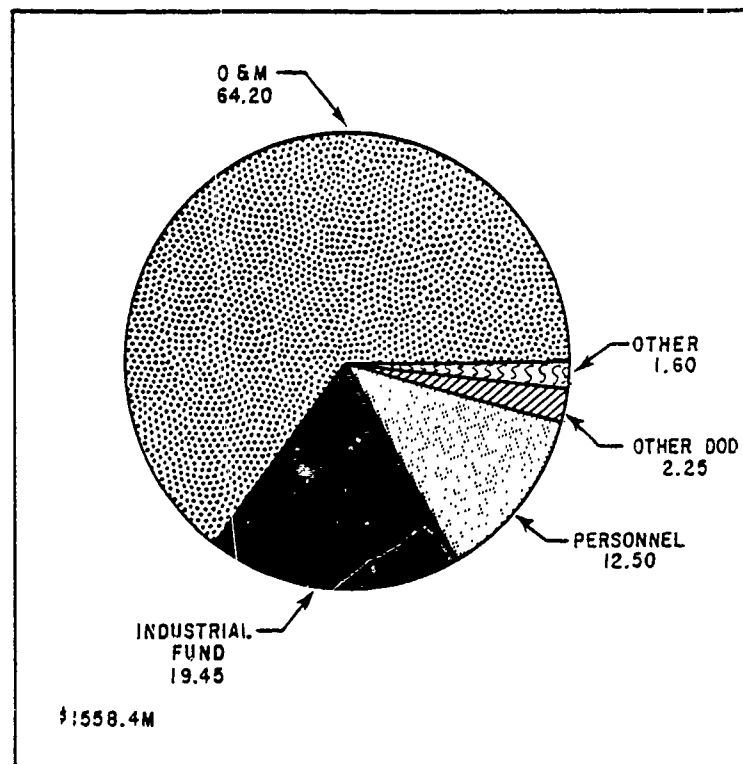
Figures 2-6 through 2-8 depict projected FY86 sales for the retail divisions in the Army, Navy, and Air Force stock funds, respectively. (DLA has no retail divisions beyond a small retail operation in support of DLA itself.) In analyzing retail sales data, it should be remembered that the Navy BP-28 and Air Force GSD retail divisions finance and sell hardware and certain general support items only, and then only those items managed by wholesalers or suppliers outside their parent Service. The Army retail divisions finance and sell all types of stock-funded commodities, including materiel for which the Army is the wholesale manager.

FIGURE 2-6. ARMY RETAIL SALES



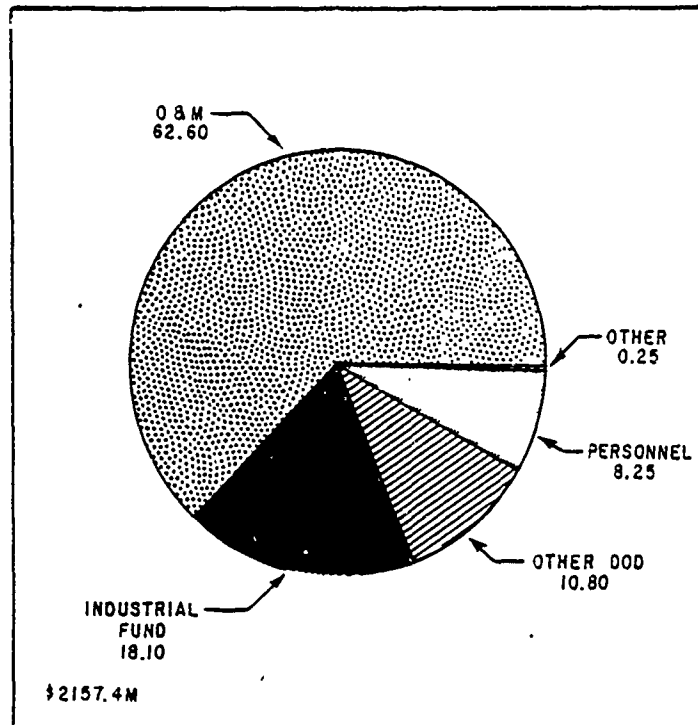
SOURCE: FY86, DoD stock fund budget submission, Standard Form 6(SF-6).

FIGURE 2-7. NAVY RETAIL SALES



SOURCE: FY86, DoD stock fund budget submission, Standard Form 6(SF-6).

FIGURE 2-8. AIR FORCE RETAIL SALES



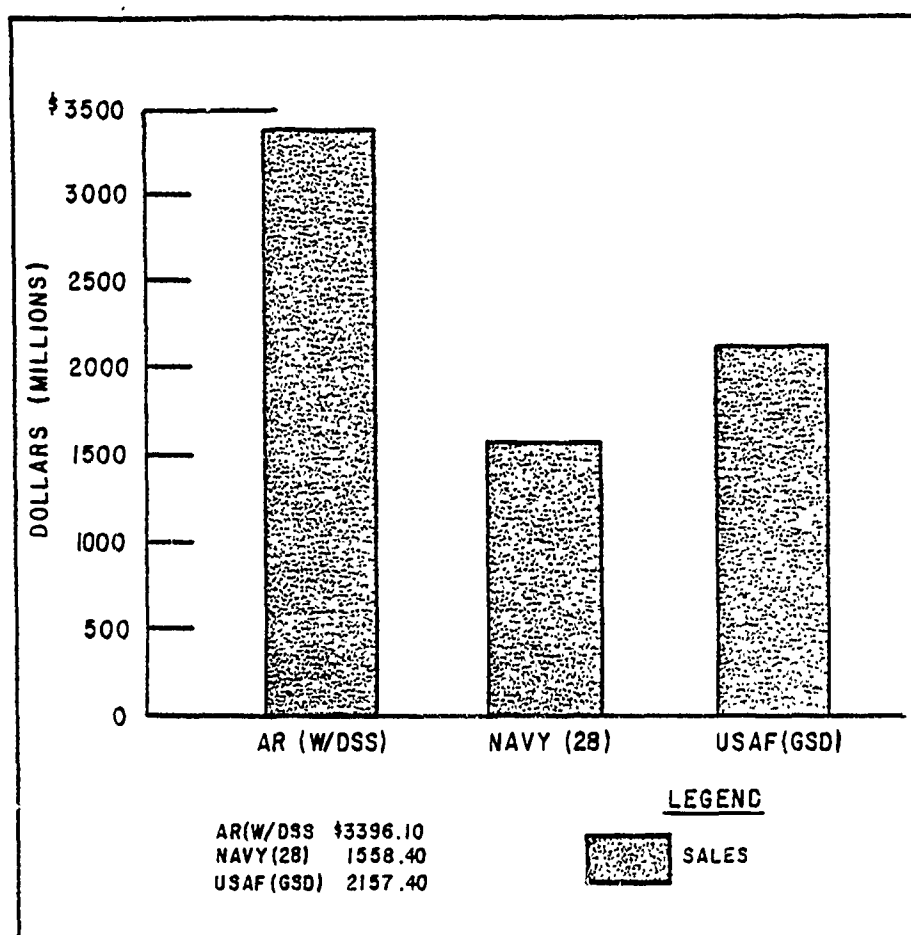
SOURCE: FY86, DoD stock fund budget submissions, Standard Form 6 (SF-6).

As the figures indicate, more than 60 percent of retail-division sales are to O&M customers -- those consumers and end-users of stock-funded materiel who pay for their purchases out of accounts funded by O&M appropriations. The retail divisions also have generally the same percentage of sales to accounts funded by military personnel appropriations. The Army's comparatively larger sales to "OTHER DoD" and "OTHER" customers can be attributed to the fact that the Army, through its Major Commands, is the owner and operator of many areas and facilities that house other government tenants, and the local Army retail division offices provide materiel support to those organizations.

Retail sales by Service are shown in Figure 2-9. Again, the Army data include the sales of all types of stock-funded commodities, as well as the sales of Army-managed items procured from the Army wholesale division. Approximately \$1 billion of the Army retail sales are sales of Army-managed

items, which include sales to DSS customers "washed through" the retail divisions. (For example, 50 percent of FORSCOM's FY85 retail sales are projected to be Army DSS sales financed through the FORSCOM retail division.) The data for the Navy and Air Force reflect sales of hardware and general support items only, and then only those items managed outside the parent Service by some other wholesaler (e.g., DLA, GSA, or another Service) or purchased locally.

FIGURE 2-9. TOTAL FY86 RETAIL SALES



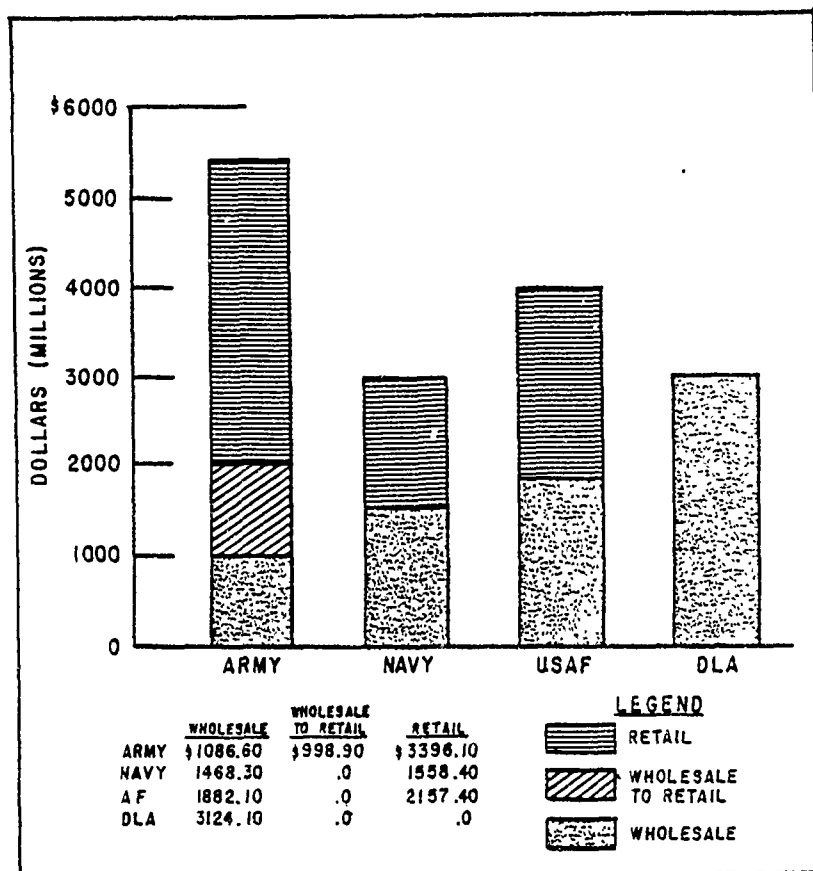
SOURCE: FY86, DoD stock fund budget submissions, Standard Form 6 (SF-6).

TOTAL SALES

Recapping total sales, Figure 2-10 displays combined wholesale and retail sales projected by the stock funds for FY86. The wholesale-to-retail portion

of the Army column reflects sales that are double-counted due to the unique relationship between wholesale and retail in the Army stock fund.

FIGURE 2-10. TOTAL FY86 SALES

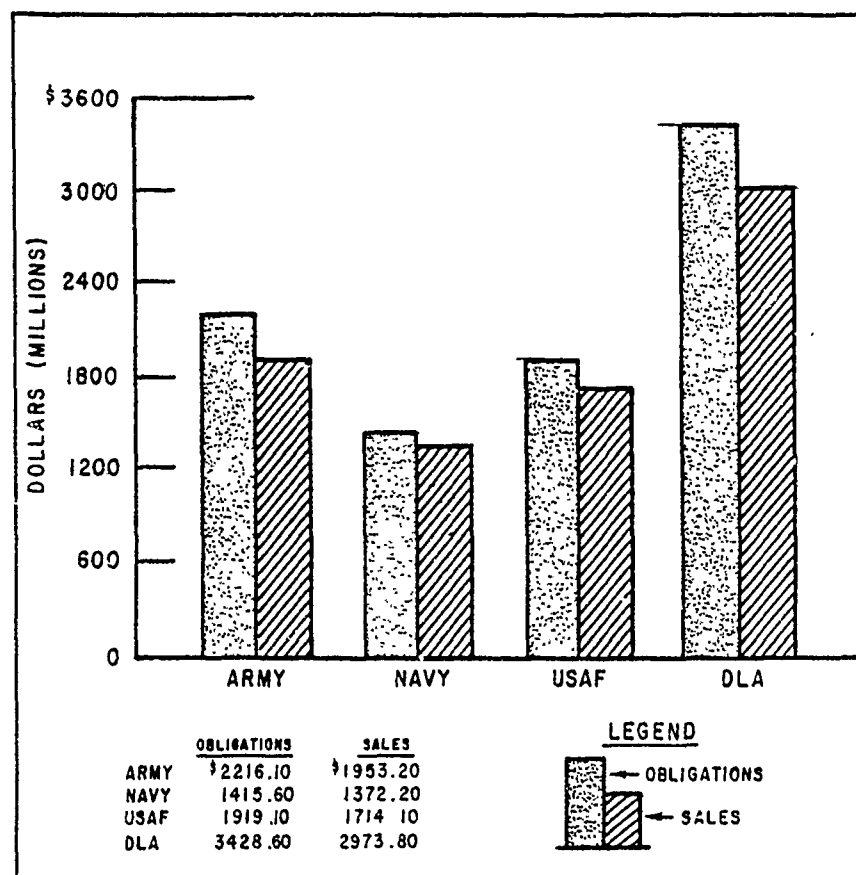


SOURCE: FY86, DoD stock fund budget submissions, Standard Form 6 (SF-6).

NET OBLIGATIONS AND SALES

Net FY86 obligation requirements and projected sales for the wholesale divisions of the stock funds are displayed in Figure 2-11. The relationship between requested obligational authority and projected sales is a traditional financial indicator used to review stock fund budgets. Obligations and sales are separated in time by at least a procurement leadtime for materiel. That is, the obligations displayed in Figure 2-11 are not in support of the sales shown for FY86 but rather are in support of projected sales a leadtime beyond FY86.

FIGURE 2-11. FY86 WHOLESALE OBLIGATIONS AND SALES



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 1 (SF-1).

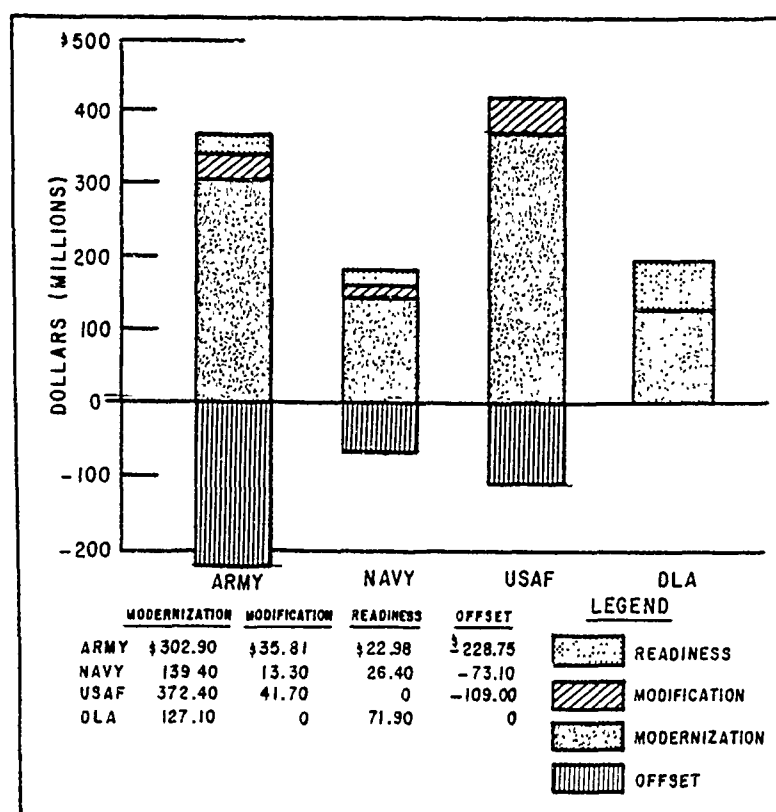
Under "steady-state" conditions (i.e., unchanging demand patterns over time), the relationship of obligations to sales is a useful indicator of the financial health of the stock funds. When obligation-to-sales ratios are different than one, they indicate that change is taking place in stock fund operations. The ratios in and of themselves, however, are not enough to identify the source of change (e.g., whether increasing obligational requests are demand-driven or not). Additional indicators, such as those recommended in the next chapter, are needed for that purpose.

INVENTORY AUGMENTATION

Peacetime inventory augmentation requirements are relatively new to stock fund programs and budgets. They are requirements for new or additional stocks

to support force growth and modernization, modification programs for current equipment and weapon systems, and readiness improvement initiatives. Figure 2-12 displays FY86 inventory augmentation requirements for the wholesale divisions of the stock funds in each of these three categories. Retail inventory augmentation requirements for the Army retail divisions, FMSO (Budget Project 28) in the Navy, and GSD in the Air Force are not included. Figure 2-12 also shows the offsets against gross augmentation requirements that the Services expect to be able to apply. These offsets are the result of sales of augmentation stocks obtained in prior years.

FIGURE 2-12. FY86 WHOLESALE INVENTORY AUGMENTATION



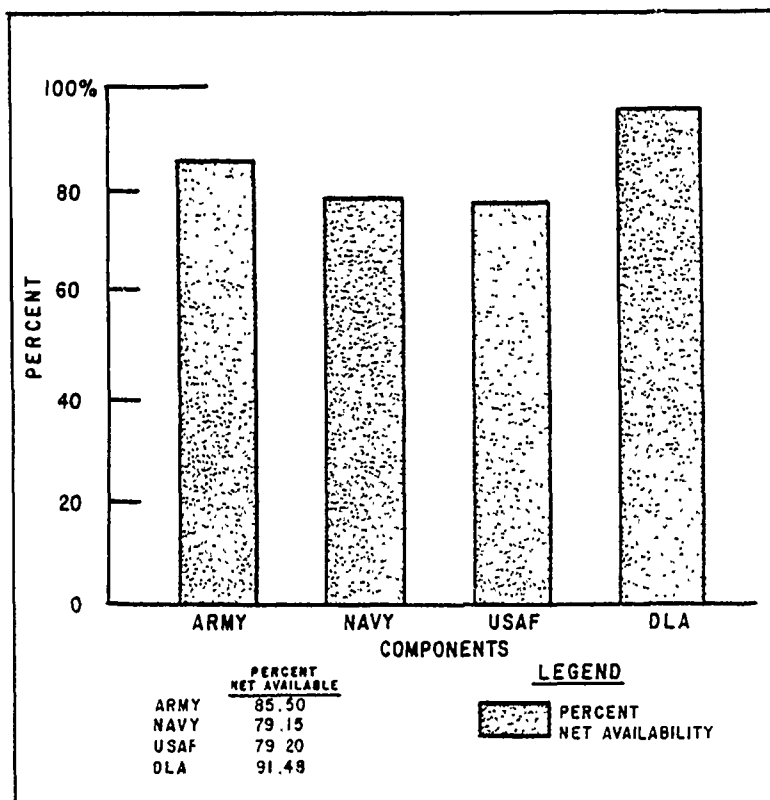
SOURCE. FY86, DoD stock fund budget submissions, Standard Form 3a (SF-3a).

WHOLESALE SUPPLY PERFORMANCE

As in prior budget preparation instructions, the budget guidance for FY86 included a request to the Services and DLA to report achieved supply

effectiveness rates in their FY86 budget requests. Figure 2-13 displays wholesale supply effectiveness rates for FY84. These rates are the percentage of immediate fills at wholesale-level supply points against demands for stocked items (and, in the Navy's case, for nonstocked items as well). Certain data in Figure 2-13 were not included in the FY86 budget submissions and were obtained directly from the Services involved.

FIGURE 2-13. FY84 WHOLESALE SUPPLY PERFORMANCE

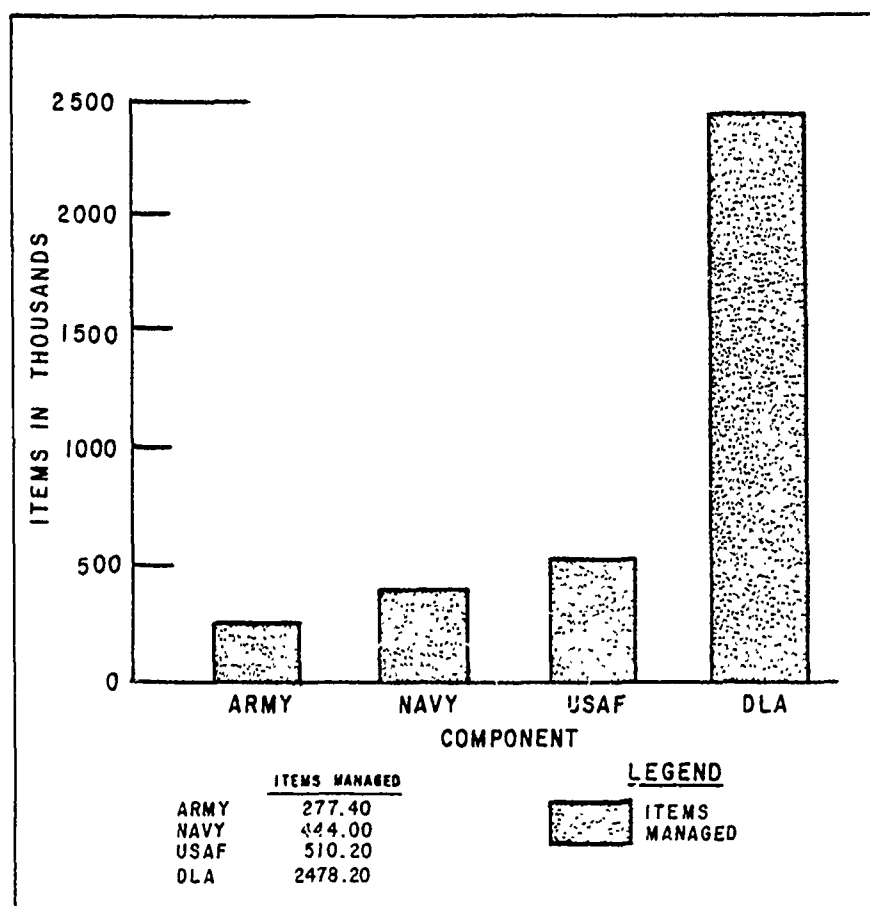


The data in Figure 2-13 are consolidated for each wholesale division and do not reflect individual ICP performance within the divisions. Also, as noted above and explained further in Appendix A, variations exist in the manner in which the stock funds record and calculate their supply performance indicators, so performance levels are not exactly comparable from one Service to the next.

ITEMS MANAGED BY COMPONENT

Figure 2-14 shows the number of items managed under each of the wholesale stock funds. DLA manages the greatest number of different line items, almost five times the number managed by any of the Services. The term "items managed" is different than "items stocked." Stocked items are items for which a computed stock level requirement exists, while nonstocked items have no stock level requirement established. However, some nonstocked items have materiel inventories on hand (e.g., items in "long supply") and they appear as "inapplicable" inventories in the budget. Thus, "items managed" refers to the total of stocked and nonstocked centrally-managed items.

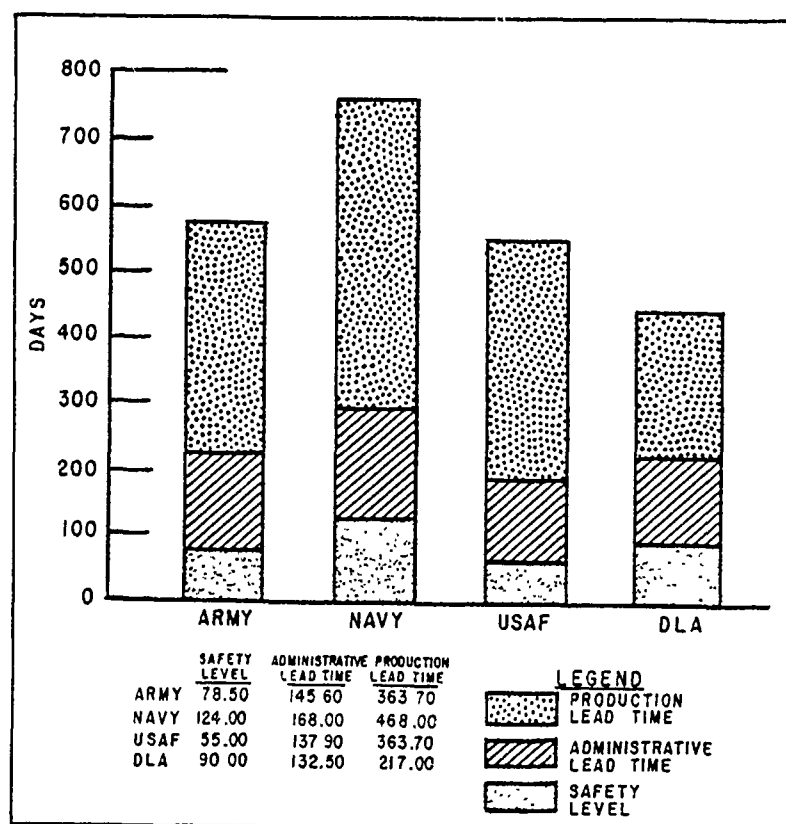
FIGURE 2-14. ITEMS MANAGED BY COMPONENT IN FY84



GROSS LEVEL REQUIREMENTS

We conclude the overview of the stock funds with a description the magnitude of wholesale supply requirements in terms of the demand they are intended to support. Figure 2-15 displays FY86 wholesale recurring-demand-based level requirements expressed in terms of the number of days of average demand they could accommodate. In the figure, PLT denotes production leadtime; ALT denotes administrative leadtime; and SL denotes safety level. These levels make up the largest part of the total wholesale requirements objective, which includes both recurring-demand-based levels and "Other" stockage levels.

FIGURE 2-15. FY86 WHOLESALE RECURRING LEVELS



SOURCE: FY86, DoD stock fund budget submissions; paragraph G, Standard Form 3 (SF-3).

The requirements in Figure 2-15 represent gross requirements prior to application of on-hand and on-order assets. As such, they are a measure of the total requirements to support forecasted demand.

The next chapter describes recommended management indicators to track and evaluate trends in requirements such as those shown in Figure 2-15, as well as other indicators for the different aspects of stock fund operations that have been discussed in this chapter.

3. MANAGEMENT INDICATORS

INTRODUCTION

In this chapter we recommend a series of management indicators to be used in evaluating DoD stock fund operations and budgets. To be useful, indicators should satisfy three conditions:

- They should be applicable to all five stock funds.
- They should provide a clear view of trends in requirements, inventory, sales, and performance without being overly sensitive to the price changes and shifting demand patterns that characterize stock fund operations.
- They should provide a basis for evaluating stated requirements.

The indicators we propose satisfy all of these conditions. Some will require additional data in the budget submissions, including a more detailed breakout of "Other Stockage Objectives" and some additional performance data. Most of this additional information was requested in the FY86 budget guidance but was not provided in the budget submissions.

In the remaining sections of this chapter we define the indicators, explain what they mean and why they are important, and present their current values, based on data submitted in the latest (FY86) stock fund budgets. The values shown, which are based on one set of budgets submitted in a single year, identify the range and scope of possible indicator values. To be fully effective, indicators should be tracked and evaluated over a period of several years using data from several different budget submissions.

THREE TYPES OF INDICATORS

We recommend three basic types of indicators: requirements-to-demand ratios, inventory-to-sales ratios, and performance ratios. The performance ratios include measures for both supply performance and financial performance.

We recommend ratio-type indicators because they provide an easy and effective way to eliminate the effect of price changes and shifting demand patterns, which can skew absolute indicators from one year to the next. This normalization of the data through the use of ratios is important for analyzing trends over a period of time.

Requirements-to-Demand Ratios

By requirements we mean statements of gross requirement objectives (i.e., levels) expressed in dollars; by demands we mean the dollar value of actual or projected requisitions.

Gross stock level requirement objectives in the stock funds represent the stock levels that have been computed to provide adequate supply support to customers. Requirements-to-demand ratios provide a clear view of trends in these levels. Increases in the ratios, for example, indicate that levels are increasing at a faster rate than the demand they support and are being driven by additional factors that may need to be explored.¹ Additionally, because the ratio is "dollars-to-dollars" applying to the same time period for both requirements and demand, price changes alone will not affect indicator values over time.

Inventory-to-Sales Ratios

Requirements-to-demand ratios provide a measure of what the stock funds think they need to meet the demand they expect. Inventory-to-sales ratios measure what they actually have (or project to have) against what they

¹Leadtime levels are linearly proportional to leadtime demand, but safety levels are not, so total requirements (which include safety levels) are not strictly linear with demand. Thus, changes in demand can and will cause requirements-to-demand ratios to change slightly, even when there is no real change in requirements beyond that driven by demand. Therefore, some fluctuation in requirements-to-demand ratios is to be expected from one year to the next, and further analysis is warranted only when changes are sizable.

have sold (or project to sell). Inventory indicators capture the effects of existing (or projected) assets, whereas requirements indicators do not. Thus, inventory-to-sales ratios provide a direct measure of inventory trends that cannot be obtained from requirements-to-demand ratios alone. Requirements-to-demand ratios provide a way to evaluate stock fund planning and programming, while inventory-to-sales ratios provide a means for evaluating actual execution.

Performance Indicators

As noted earlier, management indicators for the stock funds should provide a basis for evaluating stated requirements. Requirements-to-demand and inventory-to-sales ratios can do this as long as they are relatively stable over time, but when they are changing (as they have been since 1979²), additional measures are needed to gauge the extent to which such changes are justified.

Supply performance and financial performance indicators are the obvious choice for such measures. The only justifications for changes in requirements and inventory levels (beyond that caused by changing demand or changing leadtimes) are changes in desired levels of supply performance, or financial performance, or both. Historical and projected performance indicators should identify whether such justifications exist.

Supply availability rates (fill rates) serve as a traditional measure of supply performance. They are normally required to be submitted with stock fund budgets. The average number of unfilled orders (backordered requisitions) in place at any given time and the average delay time for requisitions are two other important measures of supply performance. For

²See Kelvin K. Kiebler, et. al., Secondary Item Inventory Growth, Memorandum Report ML401, (Bethesda, MD: Logistics Management Institute, June 1984).

evaluation of financial performance, obligation-to-sales ratios have traditionally been used as standard indicators for review.

In general, financial indicators have always played an important role in the evaluation of stock fund budgets, often overshadowing the role of supply performance indicators. We propose more extensive use of supply performance indicators in evaluating stock fund requirements and budgets. In conjunction with the indicators for requirements and inventories along with those for financial performance, the use of supply performance indicators can provide an improved basis for validating stock fund requirements.

To supplement the three types described above, we also recommend two other ratio-type indicators. The first is designed to measure the mix between requirements based on recurring demand and all other types of requirements. The second measures the ratio between applicable and inapplicable³ inventories. Like the requirements and inventory indicators described earlier, these additional two indicators will aid in evaluating the planning and execution (respectively) of stock fund operations.

The remainder of this chapter contains individual descriptions of each of the proposed management indicators, including displays of typical indicator values. The values shown are based on data in the FY86 budget submissions supplemented with certain data obtained directly from the Services and DLA. The displays include identification of source documents in the budgets for those data that were included in the budgets.

None of the proposed indicators is stock fund-specific. Each can be applied to any of the stock funds, as desired. Values, however, will vary from one fund to the next. In many of the charts that follow, values for all

³Assets for which a computed requirement does not exist (e.g., assets in long supply) are classified as "inapplicable inventory."

three Service stock funds and the DLA stock fund appear together in the same chart. This has been done only to save space, not to invite comparisons from one fund to the next. For the reasons given in Chapter 2, cross-fund comparisons, while tempting, will almost always be "apples and oranges" in nature.

REQUIREMENTS INDICATORS

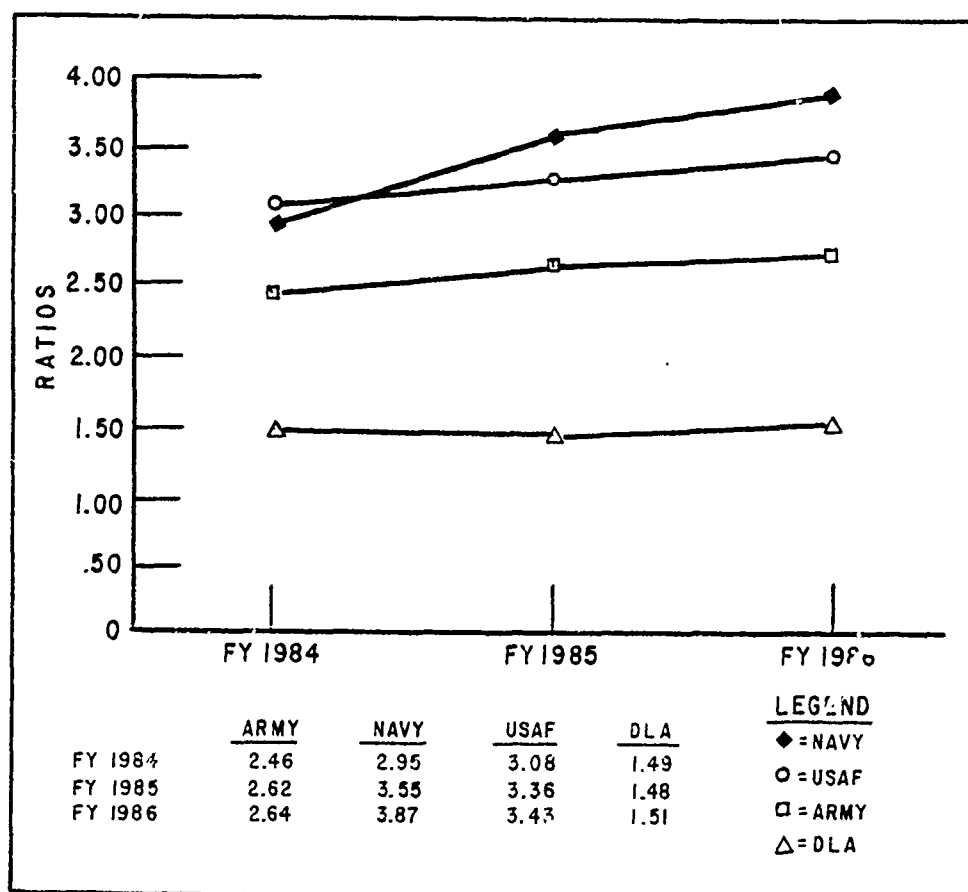
Requirement objectives for budgets are derived and recorded in Component-prepared Central Secondary Item Stratifications, and in transition statements from stratifications to budgets. Objectives are either recurring objectives (for materiel with expected recurring demand) or "Other" objectives for materiel that either has nonrecurring demand or is nondemand-based for purposes of computing requirements. (NSO and insurance items are examples of nondemand-based requirements; such items are stocked for reasons other than demand.) Recurring requirement objectives are calculated by standard inventory models for computing reorder points and economic order quantities, while "Other" objectives tend to be based on programmatic management decisions.

Less data on requirement objectives, particularly for the "Other" objectives, were included in the FY85 and FY86 stock fund budget submissions than in previous years' budgets. In the FY86 budgets, for example, while the budget guidance requested a listing of various subclasses within the category of "Other" objectives, these subclasses were not always listed. Instead some Services described these requirements only in terms of percent changes from year to year, and did not list base requirements. In other cases, "Other" objectives were not included in the statement of total requirements. Thus, in some cases the calculation of the requirements-to-demand ratios shown in this section required interpretation of the data presented in the budgets.

Total Levels/Total Demands

Figure 3-1 displays the ratios of total wholesale requirement objectives to annual demands for FY84 through FY86 as presented in the FY86 budget submissions. Because they are vertically integrated, the Navy and Air Force lines include retail-level objectives and demands (in addition to wholesale) for the items they manage. Total requirements refers to the sum of safety levels, production leadtime levels, administrative leadtime levels, repair-cycle time levels, balance-of-procurement-cycle levels, and "Other" objectives. The "Other" objectives are requirements for NSO items, insurance items, and various additive programs.

FIGURE 3-1. WHOLESALE REQUIREMENTS-TO-DEMANDS



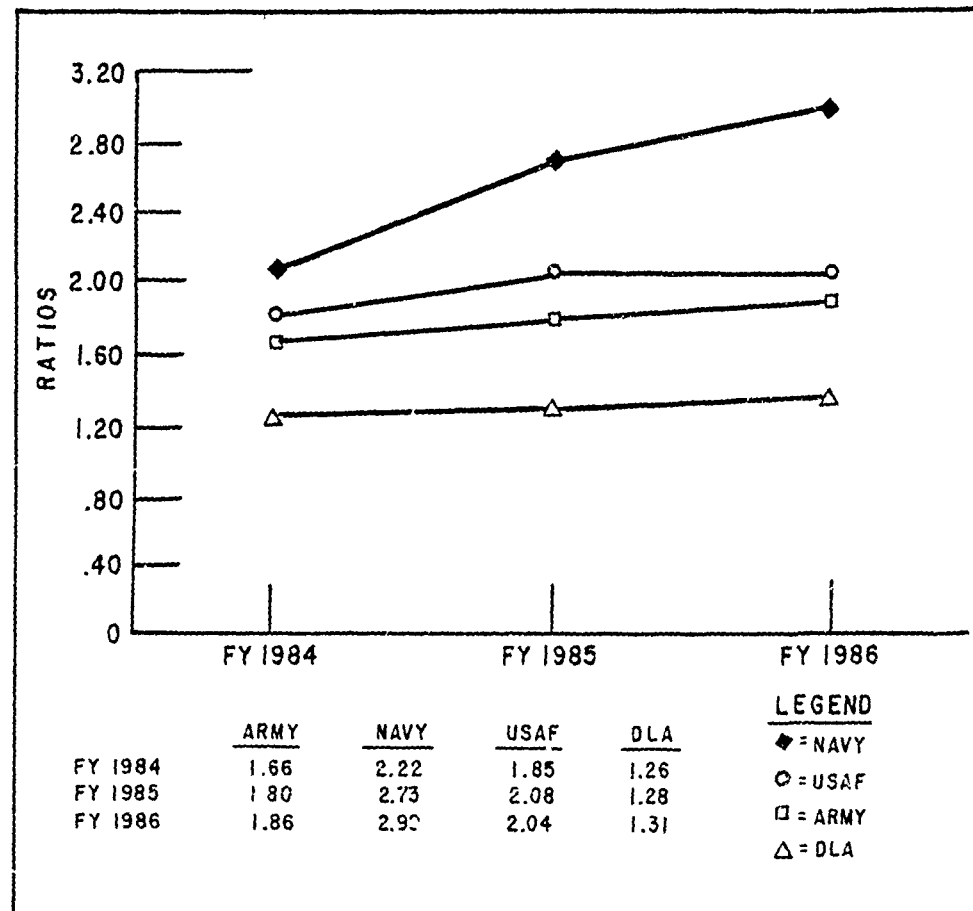
SOURCE: FY86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-283).

Stability over time in the ratios shown in Figure 3-1 would indicate that overall requirements are keeping pace with demand. Changes in the ratios would indicate that requirements are changing for reasons in addition to demand. Justification for such changes should appear as changes in leadtimes, changes in the values of performance indicators, or both.

Recurring Levels/Total Demands

Figure 3-2 focuses on the recurring-demand-based portions of wholesale requirement objectives and the relation of these levels to total demand. Recurring levels in this display include only safety levels, production leadtime levels, and administrative leadtime levels. Operating levels, repair-cycle levels, and balance of procurement cycle levels are not included.

FIGURE 3-2. WHOLESALE RECURRING LEVELS-TO-DEMAND

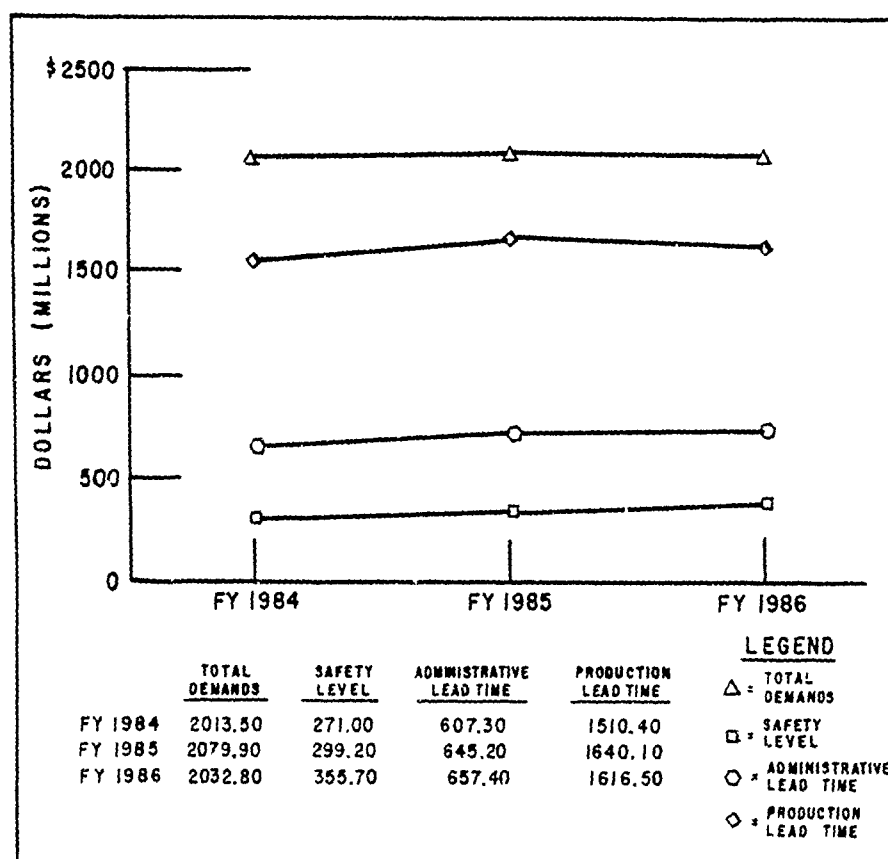


SOURCE: FY 86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-2 & 3).

The ratios in Figure 3-2 reflect trends in total recurring-demand-based requirements in relation to total demand. If these ratios change over time, one or more of the three specific recurring levels must be changing, and those that are can be identified with the specific indicators described next.

Figures 3-3 through 3-6 provide information on specific recurring levels in relation to total demand for each of the stock funds in turn. Figure 3-3 shows the projected values of safety levels, production leadtime levels, administrative leadtime levels, and total demands for the wholesale Army stock fund.

FIGURE 3-3. ARMY WHOLESALE RECURRING LEVELS AND DEMANDS



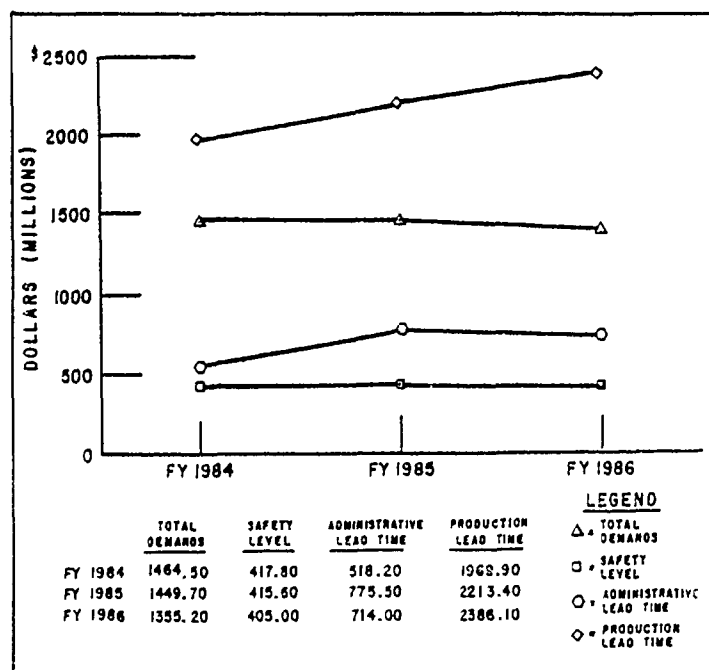
SOURCE: FY86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-263).

The values for levels shown in Figure 3-3 are not cumulative; each value stands alone by year. By examining how these levels behave in relation

to total demand, the specific "pieces" of the recurring levels requirement that may be undergoing change can be determined. An increase in the ratio between safety levels and demand, for example, might indicate a management initiative to improve supply performance, while an increase in the ratio between production leadtime levels and demand could be the result of increases in production leadtimes.

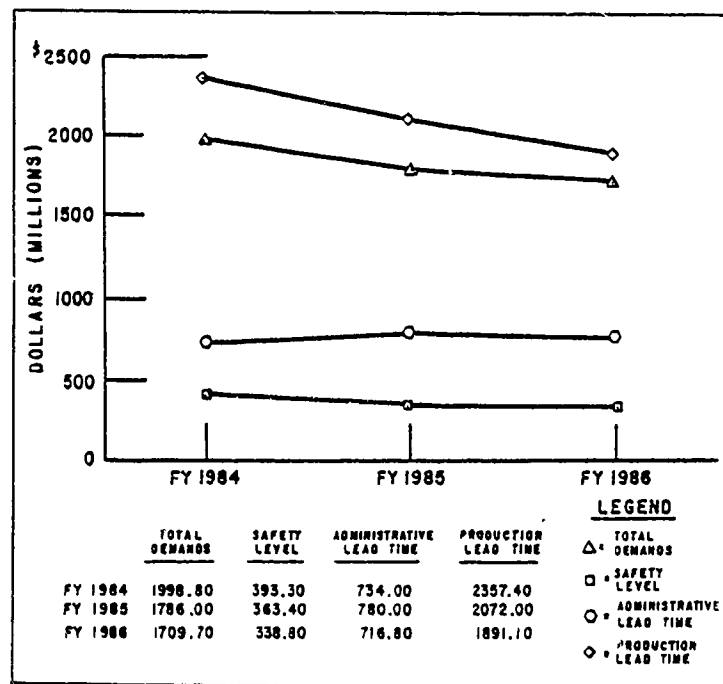
Figures 3-4 through 3-6 contain the same information for the Navy, Air Force, and DLA stock funds, respectively. The Navy and Air Force charts again include both wholesale and retail levels for Navy- and Air Force-managed items. The possibility exists that some of the recurring levels in the FY86 budget submissions included amounts for certain non-recurring levels as well, making some of the data in Figures 3-3 through 3-6 suspect. Clear and separate identification of recurring and nonrecurring levels is an example of the data expansion and standardization needed in the stock fund budget submissions.

FIGURE 3-4. NAVY WHOLESALE RECURRING LEVELS AND DEMANDS



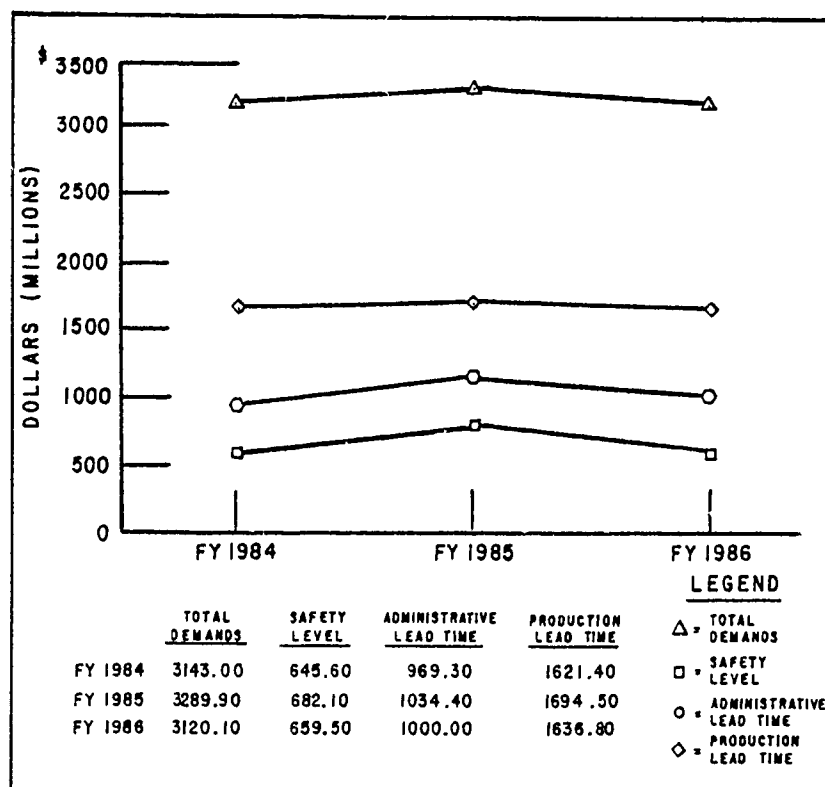
SOURCE: FY 86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-263).

FIGURE 3-5. AIR FORCE WHOLESALE RECURRING LEVELS AND DEMANDS



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-2 & 3).

FIGURE 3-6. DLA WHOLESALE RECURRING LEVELS AND DEMANDS

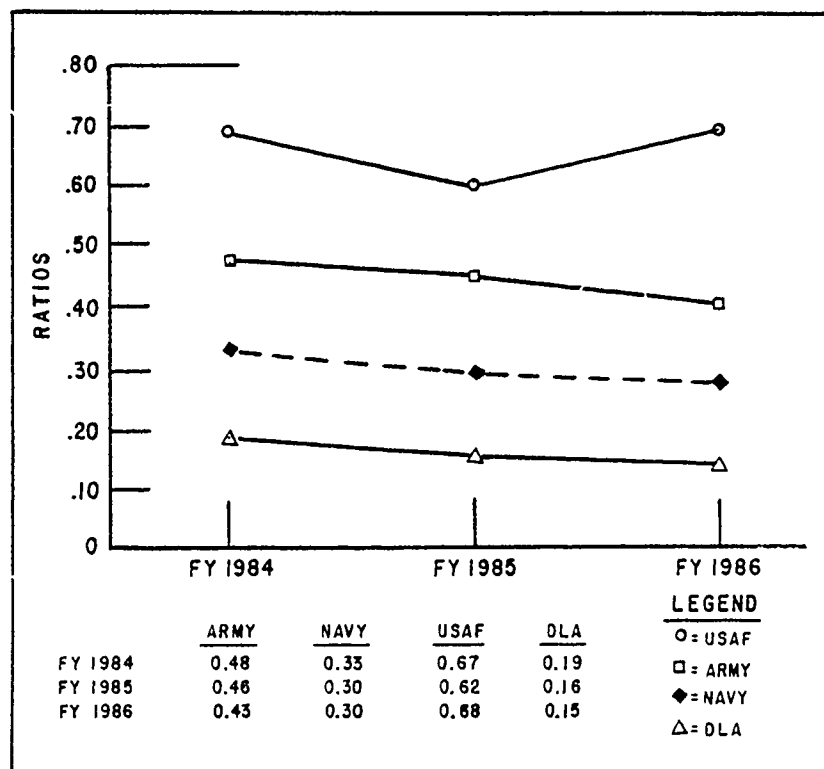


SOURCE: FY86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF 2 & 3).

Other Levels/Recurring Levels

As a final indicator for requirements, we recommend the ratio of "Other" levels to recurring levels. The largest rate of growth in stock fund requirements since 1979 has taken place in the category of "Other" objectives. This ratio is designed to detect this kind of change because it measures the mix between recurring-demand-based requirements and all other types of requirements. It is particularly important that this indicator be tracked through several budget cycles. By their nature, "Other" requirements are subject to management adjustment, so the figures in any one budget are not likely to provide a reliable basis for trend analysis. Figure 3-7 shows the values for this indicator for each Service and DLA based on data in the FY86 budget submissions.

FIGURE 3-7. OTHER LEVELS-TO-RECURRING LEVELS



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-2&3).

Ideally, the various components of the "Other" requirements category (e.g., NSO, insurance, initial provisioning, follow-on provisioning, non-recurring programs, and additives) should each be compared to recurring-demand-based levels. Such a series of indicators would be useful for isolating the specific source of any change in the overall ratio between "Other" requirements and recurring requirements. The data needed to compute these indicators, however, were not available in the FY86 budget submissions.

INVENTORY INDICATORS

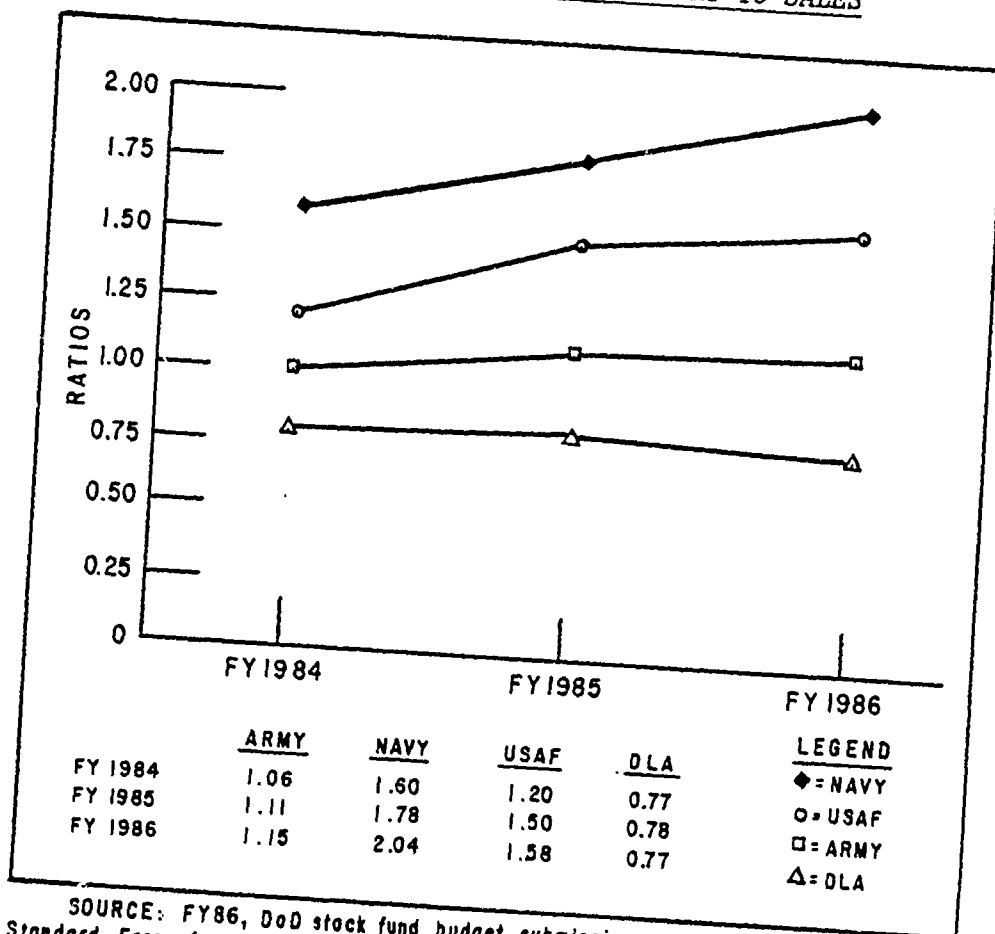
Unlike requirement objectives, inventory values reflect actual or projected assets, rather than gross requirements. Inventory-to-sales ratios, therefore, track changes in actual inventory levels in relation to sales. An increase in the inventory-to-sales ratio over time indicates that a stock fund is carrying more inventory per dollar of sales than in the past. This may signal future problems with cash liquidity if stocks are being accumulated but not sold. Thus, inventory-to-sales ratios are useful tools for identifying potential cash-flow problems as well as measuring underlying trends in inventory growth or decay.

Wholesale Inventory/Sales

Figure 3-8 shows the ratio of wholesale inventory to projected sales for each of the four stock funds based on data in the FY84 through FY86 columns of the FY86 budgets. Again, the Navy and Air Force data include retail-level data for the materiel they manage.

Increases in inventory-to-sales ratios over time are an indication that inventories are growing faster than sales. Such increases may accompany increases (a leadtime earlier) in requirements-to-demand ratios and generally occur for the same reasons: increasing leadtimes, attempts to improve supply performance, or combinations of these factors. Increases in order quantities can also cause inventories to grow faster than sales.

FIGURE 3-8. WHOLESALE INVENTORY-TO-SALES



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 4 and 6 (SF-4 & 6).

Decreases in inventory-to-sales ratios are usually taken as a sign of improvement in supply management efficiency. In these cases it is important to check performance indicators to ensure that both customer support and financial stability are being maintained.

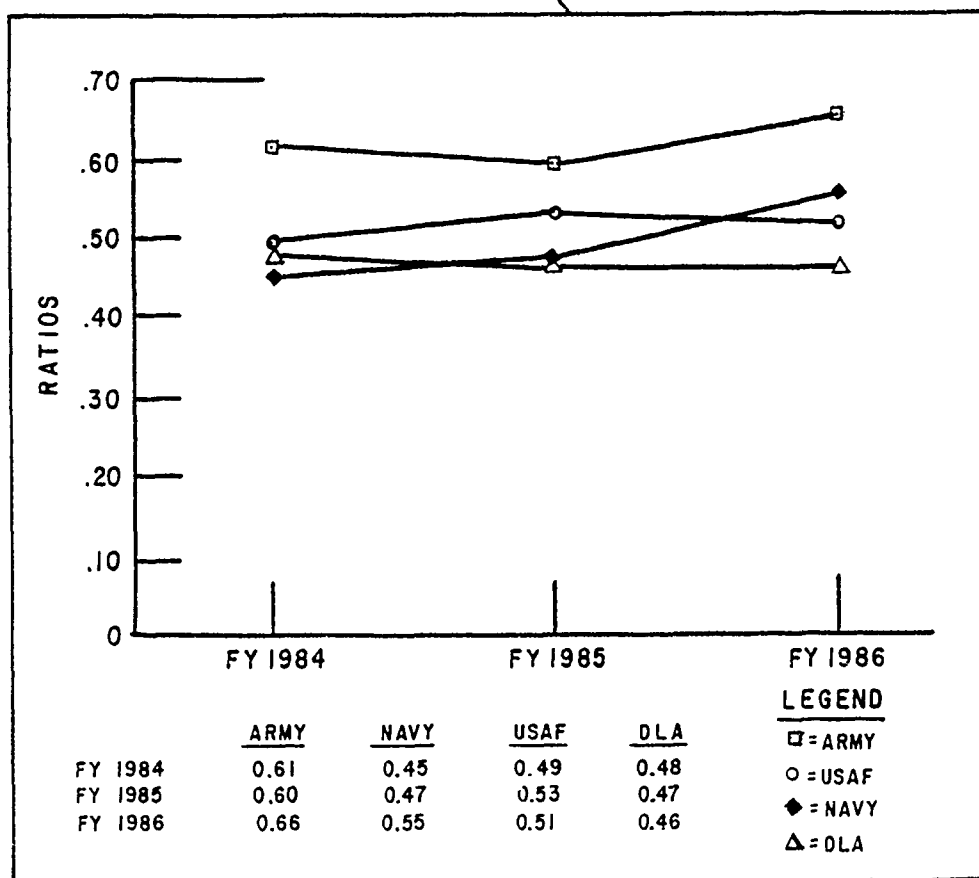
Unlike requirements, inventories are not stratified into different types of levels, so identifying the specific causes of change in the total inventory level is difficult. However, we can look at the ratio between applicable and inapplicable inventories.

Applicable Peacetime Inventory/Total Peacetime Inventory

Total end-of-period (EOP) inventory includes both applicable inventory (the assets for which a computed requirement exists) and inapplicable inventory (assets that either exceed the computed requirement or

for which a requirement no longer exists). The ratio of applicable inventory to total inventory measures the "mix" between these two types of inventory. A decrease in applicable inventory in relation to total inventory may indicate problems in demand projection or disposal policy, for example. Stable or increasing values in the indicator over time are normally a positive sign. Figure 3-9 shows the value of this ratio for the four wholesale stock funds over the three years described in the FY86 budgets.

FIGURE 3-9. APPLICABLE INVENTORY-TO-TOTAL INVENTORY



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 4 (SF-4).

PERFORMANCE INDICATORS

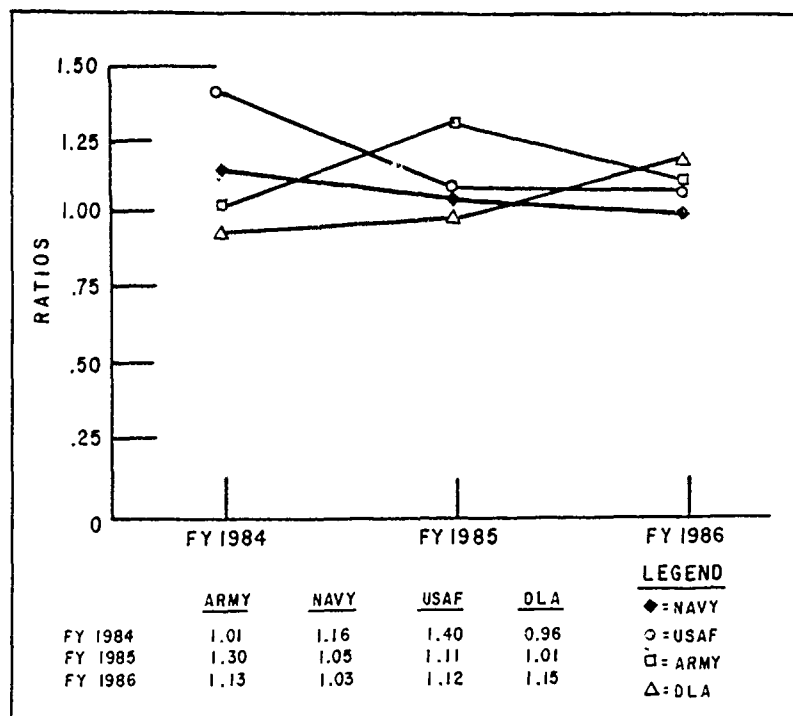
Financial Performance Indicators

As noted in Chapter 2, obligations-to-sales ratios are useful indicators of the financial health of the stock funds because they measure the

balance between obligation of dollars (requiring eventual cash outlays) and receipt of dollars (the receipt of cash from sales). Changes in obligation-to-sales ratios over time indicate that the balance between investment and sales is changing. When that happens, other indicators must be examined to determine the nature and causes of the change. Thus, obligation-to-sales ratios, the traditional financial performance measures for evaluating the stock funds, also serve as flags that may prompt further questions.

Figure 3-10 displays the relationship between net wholesale obligational authority requirements and sales for each of the four stock funds for FY84 through FY86, again based on data in the FY86 budget submissions. The FY84 ratios reflect "approved" obligational authority levels for FY84, while the FY85 and FY86 figures reflect the wholesale obligational authority requested by the stock funds for those years. (Figure 2-11 in Chapter 2 contains the obligations and sales values underlying the ratios for FY86 in Figure 3-10.)

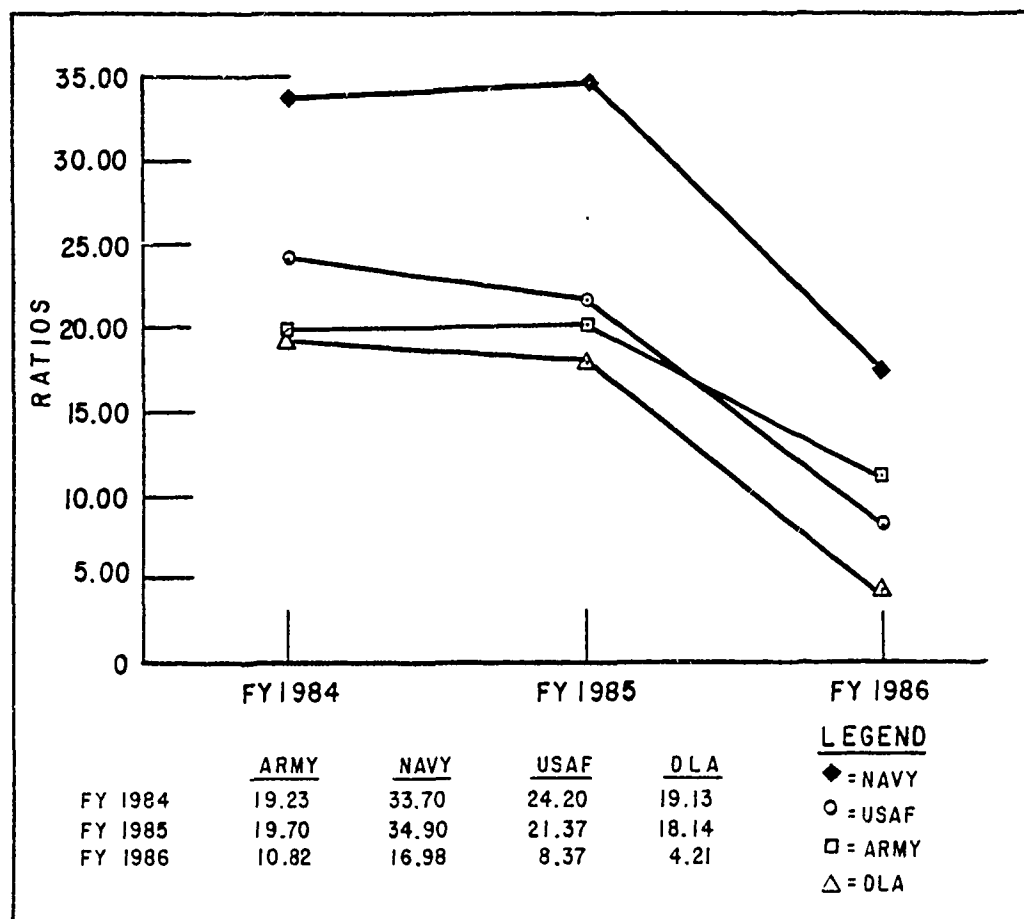
FIGURE 3-10. WHOLESALE OBLIGATIONS-TO-SALES



SOURCE: FY86 DoD stock fund budget submissions, Standard Form 1 (SF-1).

A second set of financial performance indicators are the surcharges the stock funds charge their customers. The total surcharge in each stock fund is the sum of different surcharges applied to recoup costs related to inflation (price stabilization), transportation, obsolescence, and materiel losses. The types and amounts of each of these surcharges vary from fund to fund, but the total surcharge represents the difference between the stock fund's cost and the selling price it charges its customers. Figure 3-11 shows total surcharge as a percent of cost for FY84 through FY86.

FIGURE 3-11. FY84 THROUGH FY86 SURCHARGES



SOURCE: FY86, DoD stock fund budget submissions, Standard Form 5 (SF-5).

Supply Performance Indicators

Wholesale supply availability performance objectives for budgeting purposes are not uniformly defined or established for DoD stock fund operations, and projected supply effectiveness rates are generally not included in budget submissions.⁴ As a result, we do not have a display of projected supply performance for FY84 through FY86. We recommend that the Services and DLA be directed to include projected wholesale stock availability rates in future budget submissions.

Data on historical wholesale stock availability rates are available, although they were not uniformly submitted in the FY86 budget submissions. We recommend that OSD underscore its existing guidance to the Services and DLA to include historical supply availability rates in their budget submissions. Table 3-1 shows wholesale stock availability rates for FY82, FY83, and the first three quarters of FY84.

TABLE 3-1. WHOLESALE STOCK AVAILABILITY RATES

	FY82	FY83	FY84
<u>Army</u>	82.3%	83.9%	85.5%
<u>Navy</u>			
BP-34 (ASO)	80.0	81.3	80.0
BP-14 (SPCC)	75.7	76.6	78.3
<u>Air Force</u>	86.3	82.1	79.2
<u>DLA</u>			
DCSC	90.5	90.1	89.6
DESC	90.7	92.6	92.4
DGSC	90.3	92.7	92.5
DISC	90.9	90.9	88.8

⁴Although DoD policy does not specify supply availability objectives, 85 percent stock availability (for stocked items) is often used as a desired level in evaluations of actual performance.

The Army and Air Force rates for FY84 in Table 3-1 were obtained directly from those Services and reflect performance for all of FY84 rather than just the first three quarters. Both the Army and Air Force rates reflect supply performance at the wholesale level only. The Navy rates reflect performance at wholesale and retail levels combined. All the rates reflect stock availability for stocked items only. (See Appendix A for a complete discussion of differences among the stock funds in the measurement of supply availability rates.)

In addition to supply availability rates, the guidance for the FY86 stock fund budgets directed the Services and DLA to submit average requisition delay times. Again, however, these times were not uniformly included in the FY86 budgets, in part because the data systems in the stock funds do not have uniform capabilities for tracking and recording requisition delay times across all requisitions. As an alternative approach, we recommend focusing on the average number of unfilled orders (backordered requisitions) in place at any given time. This indicator allows the direct computation of average requisition delay times (without relying on duration data) and is an important supply performance indicator in its own right. Data are available for evaluating the indicator: the projected value of unfilled orders at the end of the period is usually reported in the budget submissions and provides an estimate of the value of the average number of backorders in place at any given time. Data on unfilled orders also appear in Military Supply and Transportation Evaluation Procedures (MILSTEP) reports.

The computation of average requisition delay time from average backorders in place is straightforward: dividing the average number of backorders in place by the average demands per unit time yields the average requisition delay, measured in the given time unit. For example, if an average of

100,000 backorders are in place at any given time and the demand rate is 5,000 per day, the average requisition delay time is 20 days. The same calculation works using the dollar values of unfilled orders and demand rates, under the assumption that backordered requisitions have the same average value as all requisitions.

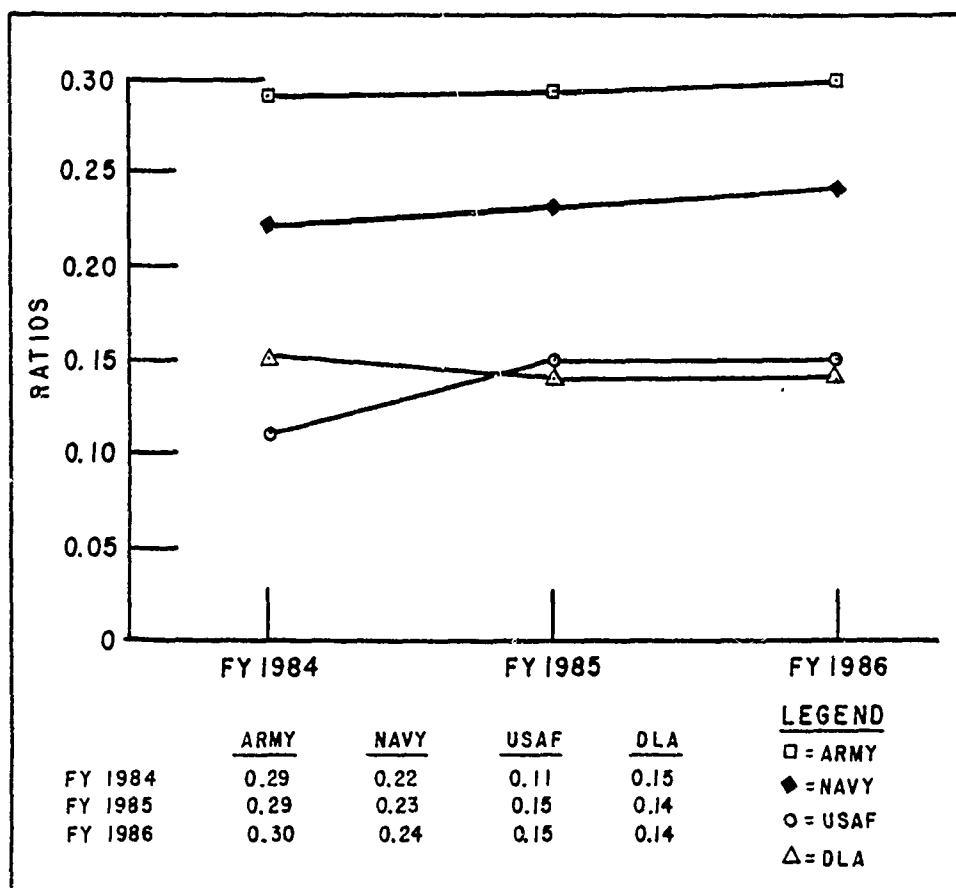
The average delay time for delayed (backordered) requisitions is also easy to compute. It is the average delay time for all requisitions divided by the nonfill rate (i.e., one minus gross supply availability). For example, if the average requisition delay time is 20 days and the nonfill rate is 20 percent, the average duration of a backorder is 100 days ($20 \text{ days} / .2 = 100 \text{ days}$).

Average unit backorders in place (which can be estimated from average requisition backorders in place using average requisition size data) are important supply performance indicators in their own right because they are key factors for estimating weapon system availability rates. These weapon system rates are measures of increasing interest in the evaluation of supply performance.

As a fourth supply performance indicator, in addition to supply availability rates, average backorders in place, and average requisition delay times, we recommend OSD track the ratio of unfilled orders (dollar value) to gross customer orders (dollar value). The value of this ratio reflects the extent to which customer dollars are being tied up in supply investment without being accompanied by supply support. For example, if the ratio is 20 percent, it means that, on average, for every dollar customers have obligated to the stock funds, 20 cents is for materiel that has not been delivered. Trends in this ratio provide an indication of the support the stock funds are providing their customers. Figure 3-12 shows projected values

for this indicator at the wholesale level for the four stock funds in the FY84 through FY86 time period, based on data in the FY84 through FY86 columns of the FY86 budget submissions.

FIGURE 3-12. WHOLESALE UNFILLED ORDERS-TO-TOTAL ORDERS



SOURCE: FY 86, DoD stock fund budget submissions, Standard Form 2 and 3 (SF-2 & 3).

SUMMARY OF RECOMMENDATIONS

The indicators we recommend can be applied to all of the stock funds and cover the three basic components of stock fund operations: requirements and demand, inventories and sales, and financial and supply performance. The indicators are designed to eliminate the effects of year-to-year price changes and shifting demand patterns and can therefore determine trends in stock fund requirements.

To improve stock fund budget evaluations, we recommend that the Assistant Secretary of Defense (Manpower, Installations and Logistics):

- Adopt the proposed management indicators for budget evaluations.
- Establish a data base (consisting of a minimum of 5 years of information spanning at least three budget submissions) for computing and tracking the indicators.
- Expand and standardize stock fund budget data submitted by the Services and the DLA to obtain necessary information to compute the proposed indicators.

APPENDIX A

SIMILARITIES AND DIFFERENCES IN THE STOCK FUNDS

This appendix describes similarities and differences among the stock funds. Although there are certain basic similarities, in most respects the stock funds are unique. Comparisons among the funds need to take these differences into account. In particular, the graphic data presented in Chapter 2 and the management indicators developed in Chapter 3 apply to all the stock funds, but particular values vary as a result of the special characteristics of the stock funds described here.

SIMILARITIES

Wholesale Operations

Many of the similarities and differences among the funds, both in their organization and in the financial and inventory management methods they use, can be understood best in the context of the interactions and distinctions between "wholesale" and "retail" operations as practiced by the wholesale and retail divisions within the stock funds.

Wholesale operations are defined by the following general characteristics that are common to all the wholesale divisions in the stock funds:

- Wholesale divisions serve as the central financial and inventory managers within DoD for items assigned to their control.
- Wholesale divisions exist to finance (i.e., budget and provide funding for) depot-level inventories (i.e., inventories at CONUS depots, overseas depots, and major supply points) within the stock funds. The wholesale divisions all operate through Inventory Control Points (ICPs), which serve as the central inventory management point for some subset of the items assigned to the division. Some ICPs also manage nonstock-funded inventory (e.g., reparable spares funded by appropriations).

Beyond these general characteristics, it is difficult to find further similarities among the wholesale divisions. Differences in areas such as ICP visibility and control of assets, relationship to retail customers and retail divisions, and asset categories by ICP are discussed in following subsections. We turn next to similarities in the retail divisions.

Retail Operations

The retail divisions in the stock funds have only one general property in common: they all exist to finance organizational- and intermediate-level inventories maintained within the stock fund of their parent Service. The retail divisions support their parent Service only (and some tenant activities). They do not have central DoD management responsibility for any items.

Unlike the wholesale divisions, which employ a common inventory management method through their use of ICPs, the retail divisions employ different methods and have different degrees of responsibility for inventory management. Also, in general, care must be taken in the use of the term "retail" since "retail activities" can comprise more than just stock-funded operations. Base supply points at Air Force bases, for example, are often referred to as retail activities, and they handle appropriation-funded reparables in addition to stock-funded consumables. Retail stocks (i.e., stocks at organizational- and intermediate-level supply points) are often held outside the stock funds in levels maintained by end-users (e.g., bench stocks in Air Force base maintenance and repair shops, Prescribed Load Lists (PLLs) in Army units, and Coordinated Shipboard Allowance Lists (COSALs) aboard Navy ships). Thus, there is a distinction between retail divisions in the stock funds and retail operations in the DoD at large.

Beyond the one common characteristic, it is difficult to find further similarities among the retail divisions. Differences in areas such as asset categories budgeted for, relationship to wholesale divisions (both within and outside the parent Service), and financial and inventory management roles are discussed in following sections. One more area of similarity among the stock funds remains, however, and this is in the area of inventory models used to compute requirements.

Inventory Models

All the inventory models for stock-funded items address the two fundamental problems of traditional inventory theory: when to order and how much to order. For items with recurring demand (either actual or expected), all the DoD stock fund requirements systems compute reorder points using some form of cost minimization model that minimizes ordering and holding costs subject to a constraint on average backorders in place (time-weighted requisitions short). Order quantities are computed using Wilson lot size methods subject to minimum and maximum constraints.

This similarity in computational methods exists because Department of Defense Instructions (DoDIs) specify that such methods will be used for recurring-demand items, both at the wholesale level (DoDI 4140.39, "Procurement Cycles and Safety Levels of Supply for Secondary Items") and at the retail level (DoDI 4140.45, "Standard Stockage Policy for Consumable Secondary Items at the Intermediate and Consumer Levels of Inventory").

DIFFERENCES

Differences among the stock funds can be grouped into three categories: structural differences in the organization of the wholesale and retail divisions; differences in the interfaces between wholesale and retail (which show up as different mechanisms for inventory and financial management); and

differences in development and budgeting methods for additive programs. The differences for additive programs include differences in both the methods used to construct the programs and in the terms used to describe them. This section describes the differences in all three areas (including the effects on budget submissions).

Structural Differences

The budgets submitted by each of the stock funds naturally reflect their organizational structures both at the wholesale level and the retail level. Differences in the way the funds have organized themselves and grouped items for management purposes lead to quantitative differences in the content of budget submissions.

With the exception of the Air Force wholesale division, all of the wholesale divisions submit budgets by ICP. The number of ICPs is not the same from one wholesale division to the next, however.

The Army stock fund has six ICPs in its wholesale division. Each is operated by a Major Subordinate Command (MSC) within the Army Materiel Command (AMC). Each Army ICP manages items in the commodity area defined by the parent MSC: aviation systems; communications and electronic systems; missiles; tank and automotive systems; armament, munitions, and chemicals; and troop support materiel.

The Navy wholesale division has two ICPs: the Ships Parts Control Center (SPCC) and the Aviation Supply Office (ASO). Both ASO and SPCC operate within the Naval Supply Systems Command (NAVSUP).

The Air Force wholesale division, called the Systems Support Division (SSD), operates through six ICPs at the five Air Logistics Centers (ALCs) under the Air Force Logistics Command (AFLC). These ICPs are basically commodity-differentiated in their responsibilities, but with some overlap due

to the weapon-system-support orientation among the ALCs. The central SSD office is at Headquarters, AFLC.

The Defense Logistics Agency (DLA) stock fund is essentially wholesale only; there are no DLA retail divisions, except for a small retail operation in support of DLA itself. There are a total of eight ICPs in the DLA stock fund, four of which manage the bulk of the repair parts, spares, and general support items assigned to DLA: Defense Construction Supply Center (DCSC), Defense Electronics Supply Center (DESC), Defense Industrial Supply Center (DISC), and Defense General Supply Center (DGSC). The other four DLA ICPs manage fuel supplies and various categories of personnel support items.

The effect of these organizational differences is that among the budgets submitted by the wholesale divisions addressed in this report, the Army and DLA budgets are (de facto) commodity-specific to a greater degree than those submitted by the Navy and the Air Force. This -- along with the simple fact that the Army submits six wholesale budgets, the Navy two (for consumables), the Air Force one, and DLA eight -- is enough to make each wholesale budget quantitatively unique in terms of number and type of items, scope of requirements, level of inventory, and volume of sales.

Just as the wholesale divisions differ from fund to fund, so also do the retail divisions. In the Army stock fund there are nine retail divisions, including six under Major Commands: U.S. Army Europe (USAREUR); Forces Command (FORSCOM); Training and Doctrine Command (TRADOC); Eighth U.S. Army (USAEIGHT) (Korea); Western Command (WESTCOM); U.S. Army Japan (USARJ); and three others: Defense Supply Service Washington (DSSW), Army Materiel Command Installations Division (AMC ID), and the U.S. Army Commissary Resale Division (USACORD). Each Army retail division submits its own budget.

For repair parts and general support items the Navy and the Air Force each has a single retail division in its stock fund, unlike the Army with its separate, command-oriented retail divisions. The Navy's retail division is managed by the Fleet Material Support Office (FMSO) within NAVSUP. The Air Force's retail division is the General Support Division (GSD), operating within AFLC.

These structural differences among the retail divisions do not in themselves generate radical differences in the content of retail division budget submissions. Differences in retail financial and inventory management methods among the divisions do, however.

The Army retail divisions finance all types of supplies (not just hardware items) from all wholesalers, including the Army wholesale divisions. The retail divisions in the Navy and Air Force (FMSO and GSD) finance retail levels for hardware and general support items only, and then only those items managed by wholesalers outside their parent Services. Retail requirements in the Navy and Air Force stock funds for items they themselves manage (through SPCC/ASO and SSD, respectively) are included in the SPCC/ASO and SSD wholesale budgets, rather than in the FMSO and GSD retail budgets. (Retail stocks of nonhardware items are financed by other Navy and Air Force retail divisions not addressed in this study. See Table 1-1 in Chapter 1 for a list of these other divisions in the stock funds.)

Thus, the relationship between the Army retail and wholesale divisions is very different than that between the retail and wholesale divisions in the Navy and Air Force stock funds. And even though the Navy and Air Force funds each has one retail division for parts and general support items managed by DLA and the other Services, a significant difference exists between the Navy and Air Force retail stock funds in their methods of inventory

management. The Air Force maintains one echelon of supply within its retail division, whereas the Navy (in most cases) maintains two. The next subsection describes this and other differences in wholesale/retail relationships in further detail.

Differences in Wholesale/Retail Relationships

With regard to evaluating requirements and budgets, the most significant differences among the stock funds are in the interactions between the retail and wholesale divisions. These differences are reflected throughout requirement statements and budget submissions. Their effect is to make cross-fund comparisons of demands, sales, assets, and requirement objectives "apples and oranges" in nature.

Differences in Financial Management. Retail levels in the Army stock fund for Army-managed items are financed by the Army retail divisions, whereas the retail divisions in the Navy and Air Force have nothing to do with the items that SPCC/ASO and SSD (respectively) manage. Thus, wholesale budgets in the Army include the value of sales to retail divisions (and Army retail divisions include similar values in their buy requirements), but Navy and Air Force budgets do not. The stock funds in the Navy and Air Force transfer (rather than sell) materiel from the wholesale level to retail stock points. In this sense both the Navy and the Air Force have "vertically integrated" financial management of the items they control. That is, the Navy and the Air Force include sales data and financing for both wholesale levels and retail levels in their wholesale budget submissions, whereas the Army does not.

Vertical integration is not similarly depicted in Navy and Air Force wholesale budget submissions, however. Retail requirements for Navy-managed items are included (but not separately broken out as retail requirements) in

"other/NSO requirements" lines of the ASO and SPCC budget submissions. Air Force retail requirements for SSD-managed items are separately identified in the SSD budget submission as retail requirements.

Further complicating comparisons is the Army's Direct Supply Support (DSS) system for facilitating transactions between its wholesale divisions and using customers. DSS sales are "washed" financially through the Army retail divisions, but the retail divisions do not stock retail levels for DSS demand. This can skew budget comparisons. For example, relationships such as the inventory-to-sales ratio for the Army retail divisions will always differ from those for the Navy and Air Force because the Army retail submissions will always show the sales, but not the inventory, related to DSS demand.

The differences described above make financial data on inventory, sales, demands, and requirements effectively unique from one stock fund budget to the next. Financial management data is not the only thing affected by the differences in wholesale/retail interfaces, however. Inventory management methods also vary and affect the content of budget submissions.

Differences in Inventory Management. The most important differences among the stock funds in inventory management lie in three areas: asset visibility and control, the echelon structure of the stock fund supply systems, and methods used for measurement of supply performance.

Although the Navy and Air Force are similar in their use of transfers between wholesale and retail for financial management, they are quite different in the asset visibility and control they maintain between wholesale and retail. In fact, in this area the Air Force and the Army are more alike and the Navy is the exceptional case.

The Air Force and the Army both employ central requisitioning to the cognizant ICP for wholesale assets, which are issued only upon receipt of a

Material Release Order (MRO) from the ICP. Under this system, Army and Air Force ICPs have complete control over their wholesale stocks. Many of the Navy's wholesale assets (those items not specifically coded for central requisitioning), however, are issued on a decentralized basis under the Navy's Transaction Item Reporting (TIR) system, under which ICPs are notified of issues after the fact. Under TIR, Navy ICPs do not have central issue control over their wholesale assets.

Although they do not maintain centralized control of wholesale assets, Navy ICPs under the TIR system do have a certain amount of visibility and control over selected retail assets, which their counterparts in the Army, Air Force, and DLA do not have. In particular, Navy ICPs can refer selected high-priority requisitions to retail supply points within the TIR system and request issuance of retail stocks. Air Force and Army ICPs have no systematic visibility or access to stocks at retail echelons in their stock funds.

The Navy is also unique in the number of supply echelons it maintains within its stock fund. A two-echelon supply system is one in which stock levels are computed and maintained in two separate systems -- a three-echelon system has three sets of levels, and so forth.¹ The Army and the Air Force stock funds both employ a two-echelon system, with stocks held at depots and bases (although the Army's extensive use of DSS makes its system more of a one-echelon system than that of the Air Force). The Navy generally employs three echelons in its stock fund -- one set of wholesale levels for its wholesale stocks and two (intermediate and consumer levels) for its retail stocks.

¹The discussion here concerns supply echelons within the stock funds. All the Services also have supply echelons under end-user control that exist outside the stock funds. Examples are given in the earlier discussion of similarities among the stock funds at the retail level.

(In some cases, the Navy does not have both retail levels in place within the stock fund.)

The existence of the second tier of retail supply levels in the Navy stock fund is yet another factor complicating cross-fund comparisons. The Army and the Air Force do not have the second type of retail levels, and thus statements in their budgets of demand, inventory on-hand and on-order, and inventory objectives cannot be compared with similar data from the Navy.

In addition to the issues of asset visibility and control and the echelon structure of the supply systems, another important aspect of inventory management in the stock funds is the measurement of supply performance. For both the wholesale and retail divisions an important part of the budget submissions is information on historical supply performance and performance objectives for the future. Again, the budgets differ, both in terminology and, in some cases, actual content.

Each of the Services and DLA has its own terminology for "gross supply availability" -- the percentage of customer demands that are immediately filled, regardless of whether the requested items are stocked or not. Current budget guidance calls for this "fill rate" measure of supply performance to be reported in budget submissions.

The Army obtains gross supply availability as the product of demand accommodation and demand satisfaction, although separate values for these two different measures are not generally included in Army budget submissions. The stock availability figures that the Army does report in its wholesale budgets are equivalent to demand satisfaction alone, namely supply availability rates for stocked items only. The retail divisions in the Army stock fund currently do not have an accurate system for obtaining supply availability rates and do not report supply performance in their budgets.

Gross supply availability is also measured in the Air Force's retail system, but the Air Force uses the term issue effectiveness. Issue effectiveness rates are recorded and tracked in internal management reports within the Air Force's retail supply system but are not generally included in the retail budget submissions.

Finally, both the wholesale Air Force and DLA report supply availability in their wholesale budgets, but they measure only against stocked items.

The preceding examples show there are differences from budget to budget in supply performance terminology. More important, however, is that even when the terms are sorted out, differences still remain in the actual content of what is being reported.

Differences in the meaning of supply performance measurements occur as a result of the differences in wholesale/retail relationships. First, the range and depth of stocked items is usually greater for wholesale echelons than for retail echelons. This makes wholesale fill rates generally higher than retail rates within a given stock fund. Second, because demands are counted in different ways from fund to fund (e.g., transfers vs. sales, different numbers of supply echelons producing different demand patterns, and different ways of classifying demand from depot maintenance activities), supply availability rates must always be interpreted in the context of the stock fund and wholesale/retail relationship in question. The Navy system provides a good example of this point. For supply points operating within the TIR system, the Navy makes no distinction between wholesale and retail assets; they are commingled and issued as required without recording whether the fill or nonfill is wholesale or retail. This procedure makes Navy measures of wholesale and retail supply availability qualitatively different in content

than apparently equivalent measures from the other stock funds, which are able to distinguish between wholesale and retail supply performance.

As another example, the retail Navy provides a true measure of gross supply availability (so-called "point-of-entry" (POE) supply effectiveness rates), while DLA and the wholesale Air Force and Navy (and the wholesale Army, as well, under stock availability) measure their supply availability rates only against items they stock. This means they are measuring net rather than gross rates (i.e., supply availability rates from the supply system's point of view rather than from the customer's point of view). In the Air Force's case this is not a serious problem because the SSD stocks virtually every item it manages, and "gross" and net supply availability rates are essentially equal. This is not the case for DLA, the Army, and SPCC in the Navy, which do not maintain levels for every item they manage.²

These differences in the meaning of supply performance terms add to the difficulty of making cross-fund comparisons. In the absence of uniform data on achieved performance and performance objectives, it becomes virtually impossible to know whether the stock funds have been achieving or are planning to achieve comparable levels of customer support.

Differences in Additive Programs

In addition to the differences in organizational structure and wholesale-retail relationships, the third important area in which the stock funds differ is in their approach to additive programs. These are programs

²Further pointing up the dangers inherent in trying to compare supply performance figures across the stock funds is the somewhat surprising fact that gross fill rates are not necessarily lower than net fill rates. In the wholesale Army stock fund, for example, many "nonstocked" items have very high fill rates. These are usually items on systems that are being phased out, so the items no longer qualify for stockage, but sufficient assets are still available to satisfy remaining demand.

that represent a significant portion of total requirements but, because they are based on something other than recurring demand, tend to be determined and included separately by management to become part of the total requirement.

As might be expected, additive programs appear under a wide variety of names and acronyms. Even when common names or acronyms are used, they can mean different things from one stock fund to another. A good example is provided by numeric stockage objective (NSO) and insurance item requirements. In the Army, Air Force, and DLA wholesale budget submissions, NSO and insurance item requirements generally refer to those for items that are stocked for reasons of essentiality rather than projected demand. Projected demand is too low (perhaps in combination with the cost of the item) to generate a computed demand-based requirement, but a level is maintained anyway to ensure weapon-system support. The Navy includes such traditional NSO and insurance requirements in its wholesale NSO/insurance line, but also includes the entire retail requirement for Navy-managed material as well, regardless of demand pattern.

Differences in additive programs can also be deeper than mere differences in names. Excellent examples, in which hundreds of millions of dollars in requirements have been involved (in the FY84 and FY86 budgets), are certain additive programs designed to provide financial hedges against demand uncertainty. Since all the stock funds must rely on projections of future demand (e.g., projected mean demand in a procurement leadtime) for computing requirements, there is always the possibility that the demand projections are wrong and requirements may be incorrect. To account for this possibility and provide funding to ensure support even when item-specific requirements are in error, some of the stock funds have begun to include additive requirements in their budget requests to take care of demand uncertainty. As yet, however, standardized rules for defining and computing these additive requirements have

not been established. As a result, the stock funds that currently include such additives in their budget requests (the Navy does so with its "cost of doing business" and the Air Force with its "reorder level deficit additive") define and compute these requirements in very different ways.³

SUMMARY

Although similar in certain fundamentals, the stock funds are different in their organizational structures, their wholesale/retail interfaces, and their approaches to additive programs. These differences are reflected in the stock fund budget submissions.

Because of these differences, stock fund requirements and budgets are unique and must be individually evaluated from fund to fund. Cross-Service and cross-fund comparisons may be interesting in terms of contrasts and variations, but such comparisons should not be used to judge one stock fund against another.

³For a complete discussion of these additives, see Kelvin Kiebler, Replenishment Budget Additives, Memorandum Report I, ML409 (Bethesda, MD: Logistics Management Institute, December 1984).

APPENDIX B
OUTLINE DESCRIPTIONS
OF
THE STOCK FUNDS

This appendix contains outline descriptions of the Army, Navy, Air Force, and Defense Logistics Agency (DLA) stock funds. The descriptions provide a view of the inventory and financial management methods employed in the funds that can serve as a framework for understanding stock fund requirements and reviewing stock fund budget submissions.

Many different types of commodities are managed in the DoD stock funds -- from food, fuel, medical supplies, and clothing -- to general support items and "hardware-type" repair parts and spares. The outlines focus on stock fund operations in the latter category. The repair parts and spares in question are items that generally are used to maintain and repair higher-level components and end items, and that are either consumed in use or are economical to repair only at the field level. The term "consumables" is often used to distinguish these items from "reparables," which are the items that are deemed economic to overhaul and repair at the depot level.

Stock funds generally have both a wholesale and a retail aspect. On the wholesale side, where the Services or DLA act as the central DoD manager and wholesaler for the parts in question, the outlines describe the following organizations: the wholesale division of the Army stock fund, Budget Project 14 (Ships Consumables) and Budget Project 34 (Aeronautical Consumables) in the Navy stock fund, the Systems Support Division of the Air Force stock fund, and the four hardware-oriented Supply Centers within the DLA stock fund. Together, these wholesale organizations manage a combined peacetime inventory (on-hand and on-order) worth \$17.1 billion in FY84 dollars.

On the retail side, where the Services operate field- and intermediate-level supply points to directly serve using customers, the outlines describe the following organizations: the five hardware-oriented divisions of the nine retail divisions in the Army stock fund, Budget Project 28 (Fleet Material Support Office (FMSO)-Retail Supplies) in the Navy stock fund, and the General Support Division (GSD) in the Air Force stock fund. Together, these retail divisions manage a combined peacetime inventory (on-hand and on-order) worth \$2.5 billion in FY84 dollars. DLA does not operate at the retail level for parts. FMSO and GSD are similar in that they are specifically charged with budgeting for and managing retail supplies that, at the wholesale level, are managed outside their parent Service. The retail divisions in the Army stock fund, on the other hand, deal equally with both outside wholesalers and the wholesale divisions within the Army itself.

The outline format used in each of the descriptions is as follows:

1. OVERVIEW

- a. Type of Stock Fund
- b. Categories of Stock
- c. Scope of Operation
- d. Performance Objectives and Actuals
- e. Management Structure
- f. Summary Budget Data (Source: FY85 Budget Estimate Submissions)

2. INVENTORY MANAGEMENT

- a. Stockage Criteria
- d. Asset Visibility
- c. Sources of Stocks
- d. Inventory Levels (Source: FY85 BES)

3. FINANCIAL MANAGEMENT

- a. Budget Process
- b. Approved Programs
- c. Cash Management
- d. Pricing
- e. Customers
- f. Inventory Maintenance
- g. Requisitioning/Financial Procedures
- h. Inventory Augmentation

4. POINTS OF SIGNIFICANT INTEREST

- a. Special Characteristics
- b. Special Characteristics of the FY85 Budget Submissions

As noted in the outline format, certain data have been drawn from the FY85 Budget Submissions. The new FY86 Budgets reflect changes in the guidance on the data to be submitted and changes in the structural nature of certain requirements (e.g., inventory augmentation). Thus, the quantitative view of the stock funds in these outlines is a 1984 snapshot, which in certain areas has been overtaken by events. Overall, however, the outlines still provide a valid overview of the scope and relative size of stock fund operations for repair parts.

OUTLINE 1. ARMY MATERIEL COMMAND
WHOLESALE DIVISION

1. OVERVIEW

- a. Type of Stock Fund: Army managed wholesale, does not include any retail levels.
- b. Categories of Stock: Army centrally managed consumable (including field level reparable) and a small number of depot level-reparable spare parts.
- c. Scope of Operations:

- Activities Managing Materiel: Army Materiel Command's (AMC) six commodity-oriented Inventory Control Points (ICPs) called Major Subordinate Commands (MSCs). The six MSCs are Aviation Systems Command (AVSCOM), Communications and Electronics Command (CECOM), Missile Command (MICOM), Tank Automotive Command (TACOM), Armament, Munitions and Chemical Command (AMCCOM) and Troop Support Command (TROSCOM).

(NOTE: TROSCOM and AVSCOM were consolidated as TSARCOM for the FY85 BES.)

- Inventory Control System: The six MSCs use the Commodity Command Standard System (CCSS), a standard AMC system to manage stock fund wholesale materiel.
- Total Stock Numbers Managed: 352,651
- Total Stock Numbers with Levels: 136,820
- War Reserves:
 - Prepositioned War Reserve (PPWR) normally stocked at retail level.
 - Other War Reserve maintained at wholesale level. PPWR, if beyond retail divisions capability to store and manage, or if directed by HQDA, can be stocked at wholesale level.
- d. Performance Data: Based on Standard Military Supply Transportation Evaluation Procedure (DoDI 4000.23 M):
 - Objective: Maintain sales, obligations and inventories within guidelines established by HQDA/OSD. Achieve 85 percent stock availability (percent of total requisitions for stocked items that are filled immediately).

- Actual:

<u>FY81</u>	<u>FY82</u>	<u>FY83</u>
83.4%	82.3%	83.9%

- See Annexes A through E for individual MSC data.

e. Management Structure:

- Policy: HQDA (ODCS Logistics and Comptroller). ODCSLOG is ASF Program Director. Fiscal policy determined by USA Finance and Accounting Center (USAFAC). (Note: Commander, USAFAC is dual-hatted as Assistant Comptroller of the Army.)
- Overall Management: Army Materiel Command (AMC), formerly Army Materiel Development and Readiness Command (DARCOM).
- Daily Operations: The six MSCs execute policy and manage materiel requirements.
- Physical Storage: Wholesale materiel physically stored at 11 depots and six depot activities that are not colocated with the MSCs. Depots are under command and control of Depot Systems Command (DESCOM), subordinate to AMC HQ, and are not controlled by MSCs.

- f. Summary Budget Data: See Annexes A through E for individual MSC data.

2. INVENTORY MANAGEMENT

a. Wholesale/Retail Interfaces:

- Under the Army's Direct Support System (DSS) assets are shipped directly from wholesale depots to retail installation Central Receiving Points (CRPs) and picked up by the end-user thus by-passing retail level handling and storage. (DSS is further discussed under Army Retail Stock Fund.)
- For DSS operations, the nature of the wholesale/retail interface is financial. The retail stock fund divisions handle only documentation and financing for DSS customers. Actual retail levels are maintained only for non-DSS users. Wholesale item managers do not have visibility of retail asset levels.

- b. Stockage Criteria: Stockage criteria applied to items varies depending on the management intensity applied, which in turn is a function of expected or observed annual-dollar value of demand. High dollar value (HDV) items receive greater management attention than low-dollar value (LDV) items.

- Range:

- In the acquisition and initial provisioning phases for new-end items, a Logistics Support Analysis (LSA) model and Source Coding Conferences determine whether an item will be an Army-managed consumable. The LSA model looks at projected maintenance requirements, deployment schedules, and retail (using unit) stockage policies to compute stockage lists. The lists are passed to the CCSS as one-time requirements.
- Once items have moved under CCSS control, they are still subject to a range test. The Army uses a cost-to-stock vs. cost-not-to-stock model (COSDIF) in line with DCDI 4140.42. For weapon system items, the shortage cost in the COSDIF model is adjusted so that demand accommodation (the fraction of demand that is for stocked items) is equal to the operational readiness target for the weapon system. (For example, if the readiness target is 90 percent, stockage will be such that 90 percent of the expected demand will be for stocked items. Note that this means these will be "non-stocked" items for which some demand is expected, in general.) Item managers have the option to stock items that fail COSDIF if stockage is viewed as essential for weapon system support or required for other reasons. Such items are classified as "NSO₂". Finally, inventories exist for many items that have entered the "non-stocked" category, to the extent that supply availability rates for so-called "non-stocked" item are in the 70-percent range. This can happen because assets for demand-based items are generally held as economic and contingency retention assets after demand has fallen off and the items have migrated from "stocked" to "non-stocked" status under COSDIF.

- Depth:

- Item levels at each ICP are computed by a standard model employing cost minimization subject to a backorder constraint, in line with DODI 4140.39. (The model is the Requirements Determination and Execution System (RD&ES) within the CCSS.) The model provides for the inclusion of NSO and insurance levels for items with low or no expected demands, in addition to levels for demand-based items. NSO items are classified as NSO₁ if the requirement for the items is based on a particular planned program (e.g., a modification workorder or depot overhaul program), and NSO₂ if the requirement is based on essentiality considerations.

For demand-based items (a demand rate of 12 or more per year normally qualifies an item as demand-based), item managers routinely apply Program Change Factors, (PCFs -- the ratio between future programs by quarter to average baseline (historical program), to adjust demand rates input to the depth model. In-use density, flying hours, rounds fired, and miles travelled are the main program units used. For HDV

items, (and LDV items used only in overhauls) separate demand projections, in addition to the basic recurring-demand calculation, may be computed for overhaul programs using a Parts Explosion Process. In this process, items required for end item overhaul are identified, and a Depot Overhaul Factor (DOF -- parts required per overhaul of one hundred end items) is applied to adjust projected demands from future overhaul programs. The projections of both normal recurring demand and overhaul demand are averaged to obtain a single projected demand against which to compute levels.

In addition, to recurring and overhaul demand, separate demand projections may be computed by item managers to establish one-time requirements for set assembly kits, initial provisioning, provisioning replenishment, life-of-type buys, and other types of demands. Demand for assets to support Foreign Military Sales is not projected in advance except in the Cooperative Logistics Supply Support Agreement (CLSSA) program.

- c. Asset Visibility: Item managers at MSCs have item visibility until stock is issued from the depot to the retail stock fund, OMA customers, or the Army Industrial Fund. For wholesale management purposes, issue constitutes consumption of the item and visibility is lost. (Note: Aviation Intensively Managed Items are an exception, and MSC item managers have visibility of assets both at wholesale and in user inventories.
- d. Source of Stocks (FY83): Stocks are purchased from industry.
- e. Inventory Levels: See Annexes A through E for individual MSC data.

3. FINANCIAL MANAGEMENT

- a. Budget Process:
 - Budget Submission (BES):
 - Developed by AMC's six MSCs. Reviewed at HQ AMC. Individual MSC budgets are forwarded to HQDA and OSD.
 - Reviewed by: HQ AMC (Supply-Maintenance and Transportation Directorate). HQDA/ODCS Logistics and Comptroller.
 - Approved by: HQDA (ODCSLOG/Comptroller)
 - Apportionment and Mid-year Review:
 - Same as budget submission; format varies based on OSD/HQDA guidance.

b. Approved Programs:

- HQDA ODCSLOG/Comptroller receive SF 1105 from OSD Comptroller.
- HQDA (ODCSLOG) forwards budget mark by message which includes guidance and rationale for adjustments. Funding Authorization Document (FAD) forwards Obligation Authority from HQDA Comptroller to HQ AMC.
- HQ AMC maintains 3679 responsibility for Obligation Authority.
- HQ AMC forwards FAD and message to MSC's. (Message may include new guidance/rationale for changes.)
- MSCs respond to HQ AMC with updated execution plans based on changes.
- AMC provides HQDA a consolidated updated execution plan and individual MSC execution plans.

c. Cash Management:

- Cash Management at HQDA (Comptroller) and HQ AMC (Comptroller). HQDA allocates 12 days of cash to HQ AMC.
- Public Law 3679/1341 responsibility for cash retained at HQ AMC for wholesale stock fund.
- USA Finance and Accounting Center, Indianapolis, Indiana provides accounting services based on monthly updates by MSC's through Army DELMARS System. USAFAC provides monthly trial balance by MSC to HQ AMC and HQDA reflecting disbursements, collections, other transactions and an ending Treasury balance.

d. Pricing:

- Standard prices for ASF items are derived from cost price updates which are computed as of 30 June each year but not effective until 1 October. The cost-price update, which does not include surcharge nor Price Stabilization Rate (PSR) is based on an item-by-item review of the latest prices for representative procurement actions. Each MSC determines the amount of surcharge to be added and HQ DA ODCSLOG determines the PSR on an average rather than an item-by-item basis. The average percent of change in price from one year to the next is targeted to equal the inflation or deflation rate in the OMA budgets and the PSR is set to achieve the target price change. The variance in ASF cash caused by the difference in inflation or deflation for stock fund procurements and the estimated inflation/deflation built in ASF prices and OMA budgets is reflected in subsequent year price changes. Gains and losses are based on a three-year cycle (e.g., FY84 projected gains/losses are reflected in FY86 price changes).

- A standard surcharge is computed by each MSC and varies from 4.3 percent to 8.2 percent. The Inventory Maintenance Surcharge (IMS) is used to generate the annual cash requirement. It is not cumulative and is 1.5 percent for FY85 and 4 percent for FY86.
- Prices provided to customers by Army Master Data File (AMDF).
- e. Customers in 1983: See Annexes A through E for individual MSC data.
- f. Inventory Maintenance:
 - Unprogrammed level increases are adjusted at Midyear Review. IMS is not used to cover unprogrammed level increases. Transfer of Obligation Authority can be made by HQDA between divisions to meet urgent requirements. (OSD Notified after the fact.)
 - Programmed level increases are funded by Peacetime Inventory Augmentation and/or by the inventory maintenance surcharge.
- g. Requisitioning/Financial Procedures:
 - Customer Obligations:
 - Prior to 1 October 83, customers obligated funding when materiel was issued.
 - Commencing 1 October 83, customer obligates funding when materiel is requisitioned.
 - Customer Backorder:
 - Requests for materiel (not-in-stock or non-stocked) from a retail division of the ASF are backordered at the wholesale MSC and are satisfied from the earliest receipt of supplies. Issue results in a sale from wholesale to retail. (Note: Section IV of appendices displays customers.) The sales to the nine retail divisions are rolled under "ASF Retail Divisions". The retail divisions of the ASF do not sell to the Army Depot Maintenance Program. (Depot Level Maintenance is depicted by the "Army Industrial Fund" line.)
 - Customer Requisitions: For DSS customers, materiel is shipped directly to the customer (to the CRP) but the wholesaler stock fund bills the retail stock fund (sale shown as wholesale to retail). Upon notification of receipt by the customer, the retail stock fund bills customer OMA funds. For non-DSS customer, the materiel is shipped and billed to the retail stock fund. Upon receipt of materiel, the retail stock fund issues to the customer and bills OMA funds. Exceptions to this process are direct sales from wholesale to OMA (see Section IV of appendices for customer). Direct OMA sales represents special projects such as the Grenada operation and special exercises. Also included in

direct OMA sales are customers sales that are granted retail stock fund by-pass authority by HQDA. By-pass authority was granted at the end of the fiscal year when materiel was available in the wholesale system but not in retail. Since OMA funds were not obligated until materiel issue prior to 1 October 83, this mechanism was used to insure that funds were obligated by the end of the fiscal year. With the change in obligation procedures effective 1 October 1983, this by-pass authority should be greatly reduced in the future.

- Customer Materiel Returns:

- If resale of the item is possible, customer will receive 100% credit.
- Lesser percentages will be given where there is no immediate need or the item requires maintenance.
- In some unusual cases no credit will be given.

h. Inventory Augmentation:

- Force Modernization:

- Identified in POM (FY86-90) and at Exhibit SF-3A, FY85 BES (by system).
- Mostly wholesale levels of repair parts in support of new weapons systems.

- Force Modification:

- Identified in POM and in FY85 BES, Exhibit SF-3A, by weapons system.
- Wholesale level is in support of modifications to existing systems. May be depot level modifications or field level modification work orders (MWD).

- Readiness and sustainability: Not used in FY85.

4. POINTS OF SIGNIFICANT INTEREST

- a. The Army automatically considers any consumable item to be a stock funded item regardless of repairability. There are currently some depot-level reparable items in the Army Stock Fund. In FY86 the Army is planning to transfer about 11,000 items between procurement funded secondary items and the stock fund in an effort to remove reparables from the stock fund and to remove low dollar value consumables from PA secondary items.
- b. AMC also operates a Mobilization Division which stocks only DLA/GSA items, which are classified as War Reserve. These stocks consist of

General Supplies, Medical/Dental, packaged POL, clothing/textiles, subsistence, and some DLA managed electronics. While this account is fiscally managed as a wholesale operation it only procures from DLA/GSA -- just as a retail account. Sales are made in peacetime only to fill high priority requisitions which DLA cannot immediately fill.

- c. In the FY85 BES (15 September 1983) Inventory Augmentation cannot be broken out from levels except through reference to backup data.
- d. As a great many requisitions reaching wholesale divisions are from Direct Support System (DSS) customers, it is important to recognize that the Army wholesale Division is directly servicing end users. DSS-end users maintain their own levels (Authorized Stockage Lists) outside of the ASF. The retail divisions only handle sales documentation and financing -- not the assets themselves.

OUTLINE 1. ANNEX A
ARMY WHOLESALE
TANK AUTOMOTIVE COMMAND

I. PERFORMANCE DATA:

- Objective (FY83): 85% Stock Availability
- Actual (FY83): 84.7% Stock Availability

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$633.5	\$604.1	\$651.6
- War Reserve	49.6	45.8	65.6
b. Obligation Authority			
- Operating	748.4	754.7	928.4
- Peacetime Augmentation	0	60.7	77.4
- War Reserve	0	4.4	1.1
c. Net Sales	711.6	755.0	831.7
d. Inventory Turnover (Sales ÷ P/T Inventory)	1.12	1.24	1.27

III. INVENTORY LEVELS (Wholesale):

a. Recurring Requirement Objectives: (in Days)			
1. Safety Level	60	63	63
2. Admin Leadtime	147	126	126
3. Production Leadtime	309	309	303
4. Procurement Cycle Requirement	204	135	171
b. Other Requirement Objectives (\$ Millions):			
1. Provisioning	\$180.5	\$ 25.1	\$444.1
2. Numeric Stockage Objective	17.0	16.7	18.0
3. Due Out	140.9	103.9	82.5
4. Other	7.5	7.5	8.1

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
a. DoD Components		
- MPA	4.0	0.5% ¹
- OMA	32.1	4.2
- Reserve Component	39.6	5.2
- Army Industrial Fund	89.5	11.8
- PAA	1.5	0.2
- RDTE	0.2	0.03
- ASF Retail Divisions	372.3	49.2
- MAP	0.2	0.03
- All Other	<u>60.5</u>	<u>8.0</u>
DoD SUBTOTAL	(\$599.9)	(79.2%)
b. Other U.S. Government	0	0
c. Trust Funds (FMS)	111.7	14.7
d. Other	<u>0</u>	<u>0</u>
TOTAL NET SALES	\$711.6	93.9%
e. Credits	<u>46.5</u>	<u>6.1</u>
TOTAL GROSS SALES	\$758.1	100.00%

¹Miscoding on part of customer

OUTLINE 1. ANNEX B
ARMY WHOLESALE
ARMAMENT, MUNITIONS AND CHEMICAL COMMAND

I. PERFORMANCE DATA:

- Objective (FY83): 85% Stock Availability
- Actual (FY83): 82.3% Stock Availability

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$316.5	\$372.4	\$451.7
- War Reserve	59.1	65.7	73.4
b. Obligation Authority			
- Operating	380.8	479.5	506.7
- Peacetime Augmentation	0	39.2	42.6
- War Reserve	0	2.0	3.0
c. Net Sales	308.2	358.7	498.7
d. Inventory Turnover (Sales ÷ P/T Inventory)	.97	.96	1.10

III. INVENTORY LEVELS (Wholesale):

a. Recurring Requirement Objectives: (in Days)			
1. Safety Level	60	60	60
2. Admin Leadtime	120	120	120
3. Production Leadtime	390	387	384
4. Procurement Cycle Requirement	159	108	153
b. Other Requirement Objectives (\$ Millions):			
1. Provisioning	\$220.8	\$307.6	\$357.2
2. Numeric Stockage Objective	4.1	4.2	5.4
3. Due Out	257.8	306.6	273.5
4. Other	4.7	4.7	5.3

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	<u>FY83 EST ACTUAL</u>	<u>PERCENT GROSS SALES</u>
a. DoD Components		
- MPA	\$ 0	0
- OMA	15.9	4.6
- Reserve Component	23.3	6.8
- Army Industrial Fund	32.0	9.3
- PAA	11.0	3.2
- RDTE	.5	.2
- ASF Retail Divisions	124.2	36.3
- MAP	.6	.3
- All Other	<u>32.1</u>	<u>9.4</u>
DoD SUBTOTAL	(\$239.6)	(70.0%)
b. Other U.S. Government	0	0
c. Trust Funds (FMS)	68.6	20
d. Other	<u>0</u>	<u>0</u>
TOTAL NET SALES	\$308.2	90.0%
e. Credits	<u>34.2</u>	<u>10.0</u>
TOTAL GROSS SALES	\$342.4	100.00%

OUTLINE 1. ANNEX C
ARMY WHOLESALE
COMMUNICATIONS ELECTRONICS COMMAND

I. PERFORMANCE DATA:

- Objective (FY83): 85% Stock Availability
- Actual (FY83): 86.9% Stock Availability

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$205.1	\$233.3	\$296.9
- War Reserve	35.2	37.2	49.6
b. Obligation Authority			
- Operating	173.7	200.6	227.4
- Peacetime Augmentation	0	7.7	10.7
- War Reserve	0	6.1	2.0
c. Net Sales	142.3	174.4	203.8
d. Inventory Turnover (Sales ÷ P/T Inventory)	0.69	0.73	0.67

III. INVENTORY LEVELS (Wholesale):

a. Recurring Requirement Objectives: (in Days)			
1. Safety Level	111	111	108
2. Admin Leadtime	135	130	130
3. Production Leadtime	333	333	351
4. Procurement Cycle Requirement	198	138	165
b. Other Requirement Objectives (\$ Millions):			
1. Provisioning	\$ 41.7	\$ 66.6	\$ 86.6
2. Numeric Stockage Objective	0.6	0.6	0.6
3. Due Out	45.4	43.7	38.4
4. Other	7.6	7.3	8.1

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	FY83 <u>EST ACTUAL</u>	PERCENT <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 0	0
- OMA	9.4	6.2
- Reserve Component	9.4	6.2
- Army Industrial Fund	7.0	4.6
- PAA	12.6	8.3
- RDTE	.5	.3
- ASF Retail Divisions	55.0	36.4
- MAP	.3	.2
- All Other	<u>30.8</u>	<u>20.4</u>
DoD SUBTOTAL	(\$125.0)	(82.7%)
b. Other U.S. Government	.7	.4
c. Trust Funds (FMS)	16.3	10.8
d. Other	<u>0</u>	<u>0</u>
TOTAL NET SALES	\$142.0	93.9%
e. Credits	<u>9.2</u>	<u>6.1</u>
TOTAL GROSS SALES	\$151.2	100.00%

OUTLINE 1. ANNEX D
ARMY WHOLESALE
MISSILE COMMAND

I. PERFORMANCE DATA:

- Objective (FY83): 85% Stock Availability
- Actual (FY83): 87.4% Stock Availability

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$ 74.2	\$ 69.3	\$ 67.1
- War Reserve	4.9	4.2	4.9
b. Obligation Authority			
- Operating	73.6	94.8	121.9
- Peacetime Augmentation	0	7.5	10.7
- War Reserve	0	.7	.9
c. Net Sales	91.6	87.9	108.0
d. Inventory Turnover (Sales ÷ P/T Inventory)	1.23	1.26	1.60

III. INVENTORY LEVELS (Wholesale):

a. Recurring Requirement Objectives: (in Days)			
1. Safety Level	30	30	27
2. Admin Leadtime	120	120	120
3. Production Leadtime	372	363	369
4. Procurement Cycle Requirement	300	261	150
b. Other Requirement Objectives (\$ Millions):			
1. Provisioning	\$ 35.5	\$46.6	77.8
2. Numeric Stockage Objective	0.6	0.6	0.6
3. Due Out	35.2	59.0	67.2
4. Other	0	0	0

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	FY83 <u>EST ACTUAL</u>	PERCENT <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 0	0
- OMA	1.8	1.7
- Reserve Component	2.6	2.5
- Army Industrial Fund	10.1	9.7
- PAA	4.3	4.2
- RDTE	.2	0.2
- ASF Retail Divisions	30.5	29.6
- MAP	0.1	0.1
- All Other	<u>4.5</u>	<u>4.4</u>
DoD SUBTOTAL	(\$ 54.1)	(52.4%)
b. Other U.S. Government	0	0
c. Trust Funds (FMS)	37.4	36.3
d. Other	<u>.1</u>	<u>.1</u>
TOTAL NET SALES	\$ 91.6	88.8%
e. Credits	<u>11.6</u>	<u>11.2</u>
TOTAL GROSS SALES	\$ 103.2	100.00%

OUTLINE 1. ANNEX E
ARMY WHOLESALE
TROOP SUPPORT & AVIATION SYSTEM COMMAND

I. PERFORMANCE DATA:

- Objective (FY83): 85% Stock Availability
- Actual (FY83): 84.8% Stock Availability

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$472.0	\$448.6	\$447.8
- War Reserve	164.9	181.3	237.4
b. Obligation Authority			
- Operating	493.3	654.7	712.9
- Peacetime Augmentation	0	15.9	19.6
- War Reserve	0	20.3	17.9
c. Net Sales	428.9	529.5	640.4
d. Inventory Turnover (Sales ÷ P/T Inventory)	0.90	1.18	1.43

III. INVENTORY LEVELS (Wholesale):

a. Recurring Requirement Objectives: (in Days)			
1. Safety Level	45	45	42
2. Admin Leadtime	138	126	120
3. Production Leadtime	414	402	396
4. Procurement Cycle Requirement	174	192	204
b. Other Requirement Objectives (\$ Millions):			
1. Provisioning	\$ 54.9	\$ 80.1	\$145.8
2. Numeric Stockage Objective	3.5	4.5	5.0
3. Due Out	166.9	197.6	177.1
4. Other	0	0	0

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 0	0
- OMA	50.9	10.8
- Reserve Component	20.4	4.4
- Army Industrial Fund	65.9	14.1
- PAA	13.2	2.8
- RDTE	.9	.2
- ASF Retail Divisions	170.9	36.5
- MAP	0	0
- All Other	<u>84.8</u>	<u>18.1</u>
DoD SUBTOTAL	(\$407.0)	(86.9%)
b. Other U.S. Government	0	0
c. Trust Funds (FMS)	21.5	4.6
d. Other	<u>.4</u>	<u>0.1</u>
TOTAL NET SALES	\$428.9	91.6
e. Credits	<u>39.0</u>	<u>8.4</u>
TOTAL GROSS SALES	\$468.6	100.00%

OUTLINE 2. NAVY WHOLESALE
AVIATION SUPPLY OFFICE (ASO) (BP-34)
AND SHIPS PARTS CONTROL CENTER (SPCC) (BP-14)

1. OVERVIEW

The Aviation Supply Office (ASO) is the Navy ICP for aeronautical consumable parts (Budget Project 34) and aeronautical depot-level reparable (Budget Project 85, in the NSF starting in FY85). The Ships Parts Control Center (SPCC) is the Navy ICP for ships consumables (Budget Project 14), shipboard (non-aviation) depot-level reparable (Budget Project 81), and advanced procurement of ships overhaul material (Budget Project 23).

a. Type of Stock Fund: ASO (BP-34) and SPCC (BP-14), Multi-echelon stock fund with wholesale levels and retail (intermediate and consumer) levels of inventory.

b. Categories of Stock:

- ASO(BP-34): Navy-centrally-managed aeronautical expense items and field-level reparable.
- SPCC (BP-14): Navy-centrally-managed consumable shipboard expense items and field-level reparable.

Note: In the Navy's cognizance symbol naming system, odd cogs denote stock-funded material, while even cogs denote material funded by appropriation. ASO (BP-34) materiel is referred to as 1R-cog and SPCC (BP-14) materiel as 1H-cog in the NSF.

c. Scope of Operation:

- Activities Managing Assets: There are 45 Navy stock points which engage in daily Transaction Item Reporting (TIR) to ASO and SPCC under the Uniform Inventory Control Point (UICP) system.
 - Approximately 15 of the TIR activities are storage sites for wholesale assets, including seven Naval Supply Centers (NSC's), three Naval Supply Depots (NSD's) and certain major Air and Weapons Stations supporting co-located depot level maintenance operations.
 - Retail: There are over 160 shore-based, retail stock points in the NSF. In addition, retail inventories within the NSF are carried aboard tenders and repair ships in the Mobile Logistics Support Force (MLSF), aboard Aviation Ships and within Marine Air Groups (MAGs), and aboard Fleet Issue Ships. Within the retail NSF, there are two echelons of supply -- intermediate and consumer.

- Inventory Control Systems:

-- Wholesale: Wholesale inventory control and visibility for both ASO and SPCC is maintained within the UICP system. FMSO, under NAVSUP direction, is responsible for system design, ADP analysis, programming, and documentation.

-- Retail: Major, shore-based retail stock points, including the 45 TIR stock points, employ the Uniform Automated Data Processing System for Stock Points (UADPS-SP). Automated, stock-funded ships and Marine Air Groups employ the Shipboard UADPS (SUADPS) for inventory control. Other retail stock points employ cyclic reporting of inventory and financial data. ASO and SPCC have visibility and limited access (based on requisition priorities) to retail assets at TIR stock points.

- Stock Numbers Managed: ASO - approximately 180,000 consumables, 60,000 reparable; SPCC -- approximately 500,000 line items

- Stock Numbers Stocked: ASO-virtually all items stocked.
SPCC-approximately 280,000 consumables,
and 70,000 reparable.

- Demands:* ASO - 2.2 million requisitions/year; SPCC - 1.2 million requisitions/year.

* NOTE: Includes requisitions for both reparable and consumables, and reflects demands at retail stock points that are reported to the ICP's under TIR, as well as requisitions directly to the ICPs.

- War Reserves: Additive levels, funded by appropriation. Pre-positioned War Reserve Material Stocks (PWRMS) are held at stock points both ashore and afloat.

d. Performance:

- Objective:

-- Wholesale: For both ASO and SPCC, within the UICP system for replenishment, parameters that determine stockage levels are generally set to achieve a System Material Availability (SMA) goal of 85 percent for computing requirements. Parameters are adjusted as necessary to accommodate funding. SMA is the percentage of customer requisitions for wholesale stocked items that are filled when they occur. The Computation and Research Evaluation System (CARES) is used by the ICP's to evaluate the financial, inventory, and supply performance effects of various parameter settings (e.g. shortage costs and safety level constraints) for use in the UICP program that computes recurring, demand-based requirements (the Cyclic Levels and Forecasting (DO1) Program). Performance objectives can be varied by cog. DO1 is a DoDI 4140.39-type "time-weighted requisitions short" model for consumables.

-- Retail: Point-of-entry (POE) effectiveness rates are supply availability rates across all demands, regardless of whether the items are stocked or not at the retail level. POE effectiveness goals at retail stock points* have been set to achieve Average Customer Wait Times, across all requisitions and all sources of supply, of 125 hours. (135 hours overseas) With the 85% SMA goal at wholesale, this translates into a 70% POE goal at intermediate-level retail stock points, and 65% at consumer-level retail stock points within the NSF.

*NOTE: Does not apply to FBM subs, FBM tenders, and the TRIDENT Refit Facility in Bangor, WA.

- Actual:

-- Wholesale SMA Rates: (includes fills with retail assets)
(Source: FY85 BES) (4 qtr. unweighted average SMA)

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u> (First 3 Qtrs)
ASO (BP-34)	79.2%	80.2%	81.1%
SPCC (BP-14)	76.2	75.8	76.0

-- Retail POE effectiveness rates for Navy-managed items:

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>
ASO (BP-34) (not available)		57.1%	56.4%	59.2%
SPCC (BP-14)	(-----not available-----)			

The ASO figures reflect POE-effectiveness for 1R-cog materiel at "level-2" CONUS Naval Air Stations to fleet customers. In general, commingling of wholesale and intermediate retail assets makes clear identification of 1H-cog retail effectiveness rates difficult.

e. Management Structure:

- Policy: Within the Office of the Chief of Naval Operations (CNO), NSF policy is set by DCNO (Logistics) -- Materiel Division (NOP-41) and the Program Planning Office - Fiscal Management Division (Navy Comptroller) - (NOP92).
- Overall Management: Naval Supply Systems Command (NAVSUP), subject to NAVMAT oversight.
- Intermediate Control: The Aviation Supply Office (ASO) in Philadelphia, PA and the Ships Parts Control Center (SPCC) in Mechanicsburg, PA are the ICPs for Navy-managed materiel.

- Daily Operations: Forty-five Navy stock points TIR daily to ASO and SPCC on transactions involving Navy-managed assets. ASO and SPCC also are subject to receive requisitions passed by more than 150 retail stock points worldwide.
- Physical Storage:
 - Wholesale: Assets are dispersed among 15 Navy stock points, including seven Naval Supply Centers (NSC's), three Naval Supply Depots (NSD's) overseas, and four major Air and Weapons Stations supporting local depot-level maintenance activities.
 - Retail: Retail stocks are located at the 45 TIR activities, and at over 100 other Navy retail stock points, both ashore and afloat.

f. Summary Budget Data (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
1) Peactime Inventory (End of Period)			
Peactime			
BP-34	2128.9	2710.0	3248.4
BP-14	1660.0	2180.1	2509.4
Mobilization			
BP-34	115.0	130.3	186.3
BP-14	73.1	103.9	123.1
2) Obligation Authority (Requested)			
Operating			
BP34	889.8	826.3	1027.0
BP-14	615.9	607.4	763.0
Augmentation			
BP-34	61.4	190.5	189.7
BP-14	84.0	142.5	99.6
Mobilization			
BP-34	19.0	14.3	10.7
BP-14	19.2	14.6	8.0
3) Net Sales			
BP-34	656.5	842.3	1036.8
BP-14	439.4	600.1	639.1
4) Net Customer Orders			
BP-34	707.5	870.2	1032.4
BP-14	535.3	555.9	656.8

	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
5) Inventory Turnover			
(Sales ÷ Peacetime Inventory)			
BP-34	.308	.311	.319
BP-14	.265	.275	.255
6) Credits from Wholesalers			
N/A	N/A	N/A	N/A
7) Numeric Stockage Objective*			
BP-34	441.3	491.7	520.6
BP-14	502.5	535.4	606.1

*NOTE: Both ASO and SPCC include retail stockage objectives as NSO objectives in their Budget submissions.

2. INVENTORY MANAGEMENT

a. Wholesale/Retail Interface:

- The movement of assets from one stock point to another within the NSF is accomplished by Other Supply Officer (OSO) transfers within the NSF, rather than by sales.
- Wholesale and retail assets can be co-located at the same Navy stock point. At such stock points, customer requisitions are filled by available assets. No distinction is made as to whether the asset is a wholesale asset or a retail asset, and any issue is reported under Transaction Item Reporting to the ICP.
- Under UICP, Navy ICP's have visibility of both wholesale (and some retail) assets worldwide, but their control of these assets, in terms of issues made, depends on whether centralized or de-centralized requisitioning procedures are used. Most Navy customers operate under de-centralized requisitioning, under which stock points issue materiel and report such transactions to the ICP after the fact, under TIR. Central requisitioning directly to ASO is used by Atlantic and Pacific Fleet major aviation ships and selected shore stations (e.g., Naval Air Stations) for ASO-managed materiel. Certain SPCC items are also coded for central requisitioning. Intermediate retail stock points (and consumer stock points with no intermediate stock point in the requisitioning chain) will pass customer requisitions to the ICP's when they do not stock or are out-of-stock on items their customers are requesting.
- In addition to their visibility of wholesale assets, the ICP's have daily visibility of the retail assets at TIR activities. The ICP's also receive periodic retail asset reports from major combatant and stores ships and smaller shore stations. Retail assets at TIR activities are counted in the calculation of system net requirements. ASO and SPCC can refer certain high priority

requisitions to retail stock points for issue at the stock points' option.

- The ICP's (ASO for 1R Cog and SPCC for 1H Cog) specify the parameters to be used in the retail intermediate range and models (ERM-the Economic Range Model and VOSL - the Variable Operating and Safety Level Model). Retail stock point managers have some latitude to adjust these parameters, however. The ICP's also determine allowance lists at consumer-level stock points.

b. Stockage Criteria:

- Wholesale:
 - Provisioning: During the acquisition phase for new weapon systems and end items, Source, Maintenance, and Recoverability Coding and Item Management Coding is done to identify those items which will be Navy-managed consumables and recoverables in the NSF. Once these decisions are made, ASO and SPCC use a variety of models to determine which items will be stocked and whether they will be demand-based or non-demand-based items. Non-demand-based items are items which fail a COSDIF range test, but are stocked nevertheless, for reasons of essentiality or criticality to end-item operation or performance. ASO and SPCC both begin with financial constraints calculated with a COSDIF DODI 4140.42-type provisioning model, but then employ different models to determine wholesale system range and depth, within the COSDIF financial constraint. Both ASO and SPCC use Item Mission Essentiality Codes and historical experience (e.g. CASREP data) to determine non-demand-based stockage. For demand-based items, ASO uses a mechanized model for major new system acquisitions, and manual methods when single line items are being introduced. The manual model computes fixed levels based on average pipelines. The mechanized model is the ASO Optimized Provisioning Model (D52) within UICP, which minimizes backorders subject to a cost constraint. SPCC uses manual methods for small provisioning packages (usually hull, mechanical, and electrical equipment) based on demand equal to: units to be installed times parts per unit times replacement factor. For electronic and fire control systems that are large in terms of parts required and/or number of ships receiving them, SPCC uses the Variable Threshold Model (D55), which tends to provision a wider range and less depth than the 4140.42 COSDIF method, while spending the same amount of money.
 - Replenishment: For replenishment stockage at the wholesale level, both ASO and SPCC employ the Cyclic Levels and Forecasting model (D01) within UICP. D01 is a time-weighted, requisitions short, cost minimization model in line with DODI 4140.39, with order quantity and safety level constraints. Requirements are computed to achieve an SMA goal of 85 percent, although funding levels usually require further parameter adjustments. Neither ASO or SPCC is currently using

program data to adjust demand forecasts for requirements. ASO has used program data in the past, but has returned to historical demand-based methods. Instead SPCC employs Follow On System Stock (FOSS) requirements that are separately computed, based on future item population, and added to the computed, demand-based levels requirements. Planned Program Requirements (PPRs) also appear in addition to conventional, demand-based levels requirements. PPRs can apply to both recurring and non-recurring programs and to both demand and non-demand-based items. Retail levels requirements computed and submitted by retail activities can appear as PPRs as a continuing, fixed requirement. The rules for stockage of NSO material vary between ASO and SPCC, but generally the NSO quantity is a minimum replacement unit equal to the number of units that would be required in a maintenance or replacement action, should it occur. NSO items for ASO generally are essential items with expected demands of less than one per year and with a history of impairing aircraft mission capability. At SPCC, items selected for NSO are those that have been the cause of a mission-degrading shipboard casualty report (CASREP) or cannibalization action in the prior three years. Also, NSO stockage is maintained for all items used in nuclear propulsion systems, strategic weapon systems (Poseidon and TRIDENT), or which have high mission essentiality.

- Retail:

- Provisioning: Stockage at the retail level of ASO material is computed with a "fixed levels" model, AVCAL, to be replaced by a DODI 4140.45-type model, RIM-AIR. ASO also employs Optimized Allowance Requirement Register (ARR) model (D53 in UICP) for provisioning of retail levels for large, complex aviation systems. ARR takes component indenture relationships into account and minimizes expected backorders in place for a given cost. SPCC uses fixed, variable, and optimal-levels models for retail provisioning. The Modified Fleet Logistics Support Improvement Program is a fixed-safety level model with a range calculation. The SPCC Variable Protection Level Model is used to compute retail levels for FBM weapon systems, TRIDENT submarines, and FFG-36 through FFG-59 ships. Finally, the Availability Centered Inventory Model (ACIM) is used to compute ship allowances for specified weapon systems (CNO approval required) when it can be shown that the system readiness objective cannot be achieved with conventional protection level models. ACIM maximizes operational availability for a given investment, or (equivalently) achieves a specified operational availability for a minimum investment.
- Replenishment: Retail models for replenishment levels for both demand and non-demand-based items are summarized in the chart below. Intermediate retail levels are set to achieve a POE effectiveness of 70 percent. Consumer retail levels are set to achieve 65 percent POE effectiveness.

RETAIL REQUIREMENTS

<u>CATEGORY</u>	<u>SHIPS</u>	<u>AIRCRAFT</u>
Demand Based Levels	<p>Intermediate</p> <ul style="list-style-type: none"> - Geographic Support (Operational Support Inventory OSI) - FiLL: Fleet Issue Load Lists <p>Consumer/Intermediate</p> <p>ERM: Economic Range Model</p> <p>VOSL: Variable Operating and Safety Level</p> <p>DBI: Demand-Based Item</p> <p>SIM: Selected Item Management (applies to retail inventories outside the NSF)</p>	<p>Intermediate</p> <ul style="list-style-type: none"> - Geographic Support <p>Consumer/Intermediate</p> <p>ERM</p> <p>VOSL</p> <p>DBI</p> <p>SIM</p>
Non-Demand Based Levels	<p>Consumer</p> <ul style="list-style-type: none"> - COSAL¹ Coordinated Shipboard Allowance Lists <p>FLSIP/MOD-FLSIP: Fleet Logistics Support Improvement Program</p> <p>ACIM¹: Availability Centered Inventory Model</p> <p>FBM: Fleet Ballistic Missile</p> <p>MCO: Maintenance Criticality Oriented</p> <p>TRIDENT</p> <ul style="list-style-type: none"> - COSBAL: Coordinated Shore Base Allowance List - TARSL¹: Tender and Repair Ship Load List - SIMSL¹ - SRASL 	<p>Consumer</p> <ul style="list-style-type: none"> - ARR¹ Allowance Requirement Register - AVCAL¹ Aviation Consolidated Allowance List - SHORCAL¹ Aviation Shore Consolidated Allowance List - RIM-AIR¹

¹The TARSL, ACIM, SIMSL, AVCAL, SHORCAL, ARR, COSAL, and RIM-AIR provide both non-demand-based and demand-based requirements.

c. Asset Visibility: As noted in section 2a., ICP's have asset visibility, based on Transaction Item Reporting in UICP, of both wholesale and selected retail assets.

d. Sources of Stocks:

- Wholesale: Obtained from commercial vendors.
- Retail: Retail stocks of Navy-managed items are obtained from ICP-controlled wholesale stocks and from other, intermediate-level retail sites.

e. Inventory Levels:

1) Wholesale Levels (in days): (These figures reflect requested levels, as opposed to funded levels.)

<u>BP 14</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
Safety level	93	134	134
Admin leadtime	146	155	155
Production leadtime	402	413	413
Procurement cycle	62	73	106
Other Objectives:	(see section 1.f.7 above)		

<u>BP 34</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
Safety level	101	101	101
Admin leadtime	122	122	122
Production leadtime	479	479	479
Procurement cycle	93	103	105
Other Objectives	(see section 1.f.7 above)		

2) Retail levels: Retail level objectives for Navy-managed material are included in the "other operating inventory objectives" line of wholesale objectives as NSO objectives. Dollar values for BP-34 retail levels within the NSO line were not given in the FY85 BES, and for BP-14 materiel only partial retail levels were given in the FY85 BES.

3) Inventory Augmentation - Wholesale and Retail: (\$ in million) Wholesale augmentation requirements are not included in the wholesale levels objectives shown in 2.e.1 above. They appear as separate requirements in the FY85 BES and are listed below. Some retail inventory augmentation requirements are included in the "other objectives" line of the wholesale SPCC strat, however, (e.g., FOO-Follow-On-Outfitting, (which qualifies as Force Modernization) and Special Programs to create intermediate Operational Support Inventories, under RIMSTOP implementation, (which qualifies as Readiness and Sustainability Improvement.) These retail programs are itemized in the FY85 BES under "deviation analysis", which is defined as the difference between total requested obligational authority and projected customer

orders. In the ASO BP-34 BES, FGO is separately broken out under Inventory Augmentation. (Source: FY85 BES)

<u>BP-14</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
a. Force Modernization	-0-	77.0	79.7
b. Force Modification	-0-	19.2	19.9
c. Readiness and Sustain- ability	-0-	15.2	0
d. Expenditures*	<u>84.0</u>	<u>31.1</u>	<u>0</u>
Total	84.0	142.5	99.6

<u>BP-34</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
a. Force Modernization	-0-	133.4	167.6
b. Force Modification	-0-	10.3	22.2
c. Readiness & Sustain ability (VOSL)	-0-	3.5	-0-
d. Expenditures	<u>61.4</u>	<u>43.3</u>	<u>-0-</u>
Total	61.4	190.5	189.8

*NOTE: Expenditures reflect a request for appropriated funds to reimburse the NSF for purchases already made that qualify as inventory augmentation.

3. FINANCIAL MANAGEMENT

a. Budget Process:

- Budget Submission (BES):

- Prepared by ASO for BP-34 and SPCC for BP-14 based on the stratification program in UICP (B20). Retail level requirements for Navy-managed items are included in "other objectives" requirements in the wholesale stratification.
- Reviewed by NAVSUP, NAVMAT, NAVCOMPT (OP-92) and CNO (OP-41) for submission to OSD Comptroller.
- Apportionment & Mid-Year Review: Done routinely each year from March and September stratifications. (BES done from March stratification.) Stratifications are initiated by NAVSUP letters to the ICPs.

b. Approved Programs (Budget Execution):

- NAVSUP receives SF 1105 obligational authority from OSD Comptroller (via SECNAV, NAVCOMPT, CNO, and NAVMAT channels) and, as budget activity administrator, suballocates obligational authority and commitment authority to each Budget Project manager.

ASO as manager for BP-34, and SPCC as manager for BP-14, hold Public Law R.S. 3679 responsibility for obligations in those Budget Projects.

- SPCC passes "psuedo" operating targets (OPTAR) down to retail stock points as a control on retail acquisition of SPCC-managed materiel within the total O/A plan for SPCC. ASO relies on retailers to conform to their (approved) budget submissions.

c. Cash Management:

- Each BP in the NSF has a separate identify in the NAVSUP accounting system, but only total NSF cash is managed to a specific member of days.
- P.J. 31 USC 1517 responsibility for each management is retained at NAVSUP.
- The Navy Regional Finance Center (NRFC) in Washington, D.C. provides centralized bookkeeping to the ICPs for wholesale materiel (\$ value) held at non-TIR activities, based on Financial Inventory Reports (FIRs) submitted to the Fleet Accounting and Disbursing Centers (FAADCs) on each coast. NRFC/FAADCs also process billing tapes for all stock fund sales. Many stock points have been relieved of FIR reporting and billing through participation in Centralized Accounting and Billing done by the ICP's, themselves, based on transaction item reporting data.

d. Pricing:

- Wholesale: The Navy Stock Fund Surcharge, which is determined separately for each Budget Project, applies a percentage fee to the basic replacement cost of each Navy-managed item to recoup costs of transportation, physical losses, and obsolescence. Obsolescence surcharges cover the cost incurred by the NSF for materiel bought but never sold due to: erroneous demand forecasts, technological improvements (rendering inventory obsolete), or deactivation of systems. Both ASO and SPCC have also proposed "operating inventory" surcharges to begin in FY85. These are inventory maintenance surcharges to cover unforecasted changes in demand.
- Surcharges (%):

<u>BP-14</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
Transportation	2.1	2.1	2.1
Inventory Losses	2.3	2.3	2.3
Obsolescence	10.6	10.6	10.6
Operating Inventory	-0-	-0-	5.4
Price Stabilization	8.1	18.5	4.1

<u>BP-34</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
Transportation	1.3	1.3	1.3
Inventory Losses	2.7	2.7	2.7
Obsolescence	11.0	11.0	11.0
Operating Inventory	--	--	5.4
Price Stabilization	7.9	18.3	4.1

- The Price Stabilization percentages shown above are set so that the increase in standard price charged to customers from one year to the next is equal to the increase budgeted in the customer O&M funding. The Price Stabilization Factor (PSF) is added to the other Navy surcharges to compute the total percentage to be applied to the item replacement cost to obtain the standardized price. NAVSUP computes the PSF with an iterative, item-by-item method that posits a PSF, examines it over all items, and then adjusts it to make it match the O&M target. Gains or losses in the NSF resulting from differences between NSF experience and O&M experience with inflation/deflation are accommodated in subsequent year price updates in a three-year cycle. For example, gains or losses experienced in the NSF in FY83 would normally be reflected in the price update for FY85.
- Retail: Customers purchasing Navy-managed items from retail stock points in the NSF are charged the Standard Price, which is recorded in the UICP in the item Master Data File (MDF). All customers are billed by the ICPs, regardless of whether they centrally or decentrally requisitioned.

e. Obligation/Order Authority:

- Within ASO and SPCC, operating targets, (OPTARs) are set for various management categories to control total obligations made for the Budget Projects and to keep within the approved program.
- At the retail level, SPCC disseminates "psuedo" OPTARs to retail stock points as a control on the use of Navy-managed materiel. ASO relies on retail stock points to operate in conformance with their submitted and approved targets within the wholesale budget.

f. Wholesale/Retail Interface:

- Because the ICP's perform centralized billing, sales of the NSF are not "wholesale" or "retail". The wholesale/retail distinction applies to inventory management, not financial management.
- The fact of decentralized stockage and requisitioning, and daily transaction item reporting to the ICPS, makes the NSF wholesale/retail interface unique in DoD in terms of the nature of the ICP's control of wholesale assets and their movement to retail stock points and customers. Navy ICP's (more so SPCC than ASO, since ASO does rely on centralized requisitioning to a larger degree) do not make the decision to release wholesale assets. They find out about asset movement after the fact, under TIR.

- Wholesale ICP's deals directly with consumers when retailers are either out-of-stock or do not stock a requested item. In these cases the customer requisition will be passed to the ICP with the customer's funding "attached".

g. BP-14 and BP-34 Customers in FY83 (Source: FY85 BES SF-6)
(\$ in Millions):

	<u>BP-14</u>		<u>BP-34</u>	
	<u>Dollars</u>	<u>Percent of Gross Sales</u>	<u>Dollars</u>	<u>Percent of Gross Sales</u>
1) DoD Components				
- O&M Marines Corps	--	--	1.2	.2
- RDT&F Navy	.1	--	--	--
- Military Pers. Navy	--	--	--	--
- Aircraft Procurement Navy	.4	--	.4	--
- Shipbuilding & Conv. Navy	3.4	.7	1.0	.1
- O&M Navy	241.5	52.9	170.4	24.1
- O&M Navy Reserve	4.0	.8	5.5	.8
- Other Procurement Navy	.3	--	.1	--
- Navy Stock Fund	2.3	.5	.4	--
- Navy Industrial Fund	145.2	31.8	360.8	51.1
- Army	3.8	.8	5.5	.8
- Air Force	10.6	2.3	77.2	10.9
- Other DoD	<u>2.2</u>	<u>.5</u>	<u>7.6</u>	<u>1.1</u>
DoD Sub-total	\$413.8	90.3%	\$630.1	88.0%
2) Other Federal Agencies	6.5	1.4	1.8	.3
3) Trust Funds (FMS)	16.1	3.5	24.1	3.4
4) Other	<u>3.0</u>	<u>.7</u>	<u>.5</u>	<u>--</u>
Total Net Sales	439.4	95.9%	656.5	91.7%
5) Credits to Customers	<u>17.4</u>	<u>4</u>	<u>49.4</u>	<u>7</u>
Total Gross Sales	\$456.8	100%	\$705.9	100%

h. Inventory Maintenance: As noted in section 3d. above, both ASO and SPCC requested an "operating inventory" surcharge in their FY85 BES for FY86. The surcharge was 5.4% for both BP-14 and BP-34.

i. Requisitioning/Financial Procedures:

- Customer Obligations: Customers obligate upon requisition.

- Customer Backorders:

- Requests for materiel that is not-in-stock (NIS) or not-stocked (NS) are passed to the ICP (or perhaps a intermediate retail stock point, if one exists). Once requisitions reach the ICP they are either backordered or referred by the ICP to another stock point. Requisitions for both NS and NIS items are passed up with customer funding "attached" and counted as a direct sale from wholesale.
- Passed customer requisitions are not automatically filled upon receipt of replenishment stocks at the retail stock point, although periodic asset/requisition comparisons are made to fill passed requisitions sooner. When this happens, the passed requisition is supposed to be cancelled.

- Customer Material Returns for Credit: Customer returns for credit are handled via a request/response TIR subsystem within UICP between the ICP and the customer at the stock points. Credit is granted if a wholesale is projected to exist through the budget year for the item, and otherwise not.

	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
		(\$ in millions)	
BP-14 Credits to Customers:	17.4	24.3	28.8
Customer Returns w/o credit:		(not available)	
BP-34 Credits to Customers:	49.4	63.4	77.3
Customer Returns w/o credit:	75.4	155.0	155.0

SOURCE: Transition Statement from FY85 BES

- Retail Stock Point Requisitions: Decentralized requisitioning (i.e., requisitions are placed on the local stock point rather than the ICP) and Transaction Item Reporting is the norm for SPCC-managed material and for many activities requesting ASO-managed items. ASO does utilize centralized requisitioning for Atlantic and Pacific major aviation ships and Naval Air Stations. That is, a NAS will centrally requisition the ASO for BP-34 material, rather than place requisitions on the Naval Supply Center serving the Air Station.

j. Inventory Augmentation:

- See section 2.e.3 above for a summary breakout of the inventory augmentation portion of the BP-14 and BP-34 FY85 BES.

- The inventory augmentation areas for BP-14 and BP-34 were as follows:

<u>BP-14</u>	<u>Force Modernization</u>	<u>FY84</u>	<u>FY85</u>
		(\$ in millions)	
	Initial Provisioning	56.4	58.8
	Follow-On System Stockage (FOSS)*	20.6	20.9
	<u>Force Modification</u>	19.2	19.9
	<u>Readiness and Sustainability</u>		
	FBM Protection levels	4.3	-
	Operational Support	8.9	-
	Inventory		
	Numeric Stockage Objectives	2.0	-
	<u>Expenditures**</u>	<u>31.1</u>	<u>-</u>
	Inventory Augmentation		
	Total BP-14	142.5	99.6

*NOTE: FOSS is the requirement for wholesale levels to support increases in population.

**NOTE: Expenditure requirements are obligations already made which qualify as inventory augmentation.

<u>BP-34</u>	<u>Force Modernization</u>		
	Initial Provisioning	112.5	120.5
	Follow-On Outfitting (FOO)*	20.9	47.1
	<u>Force Modification</u>		
	Initial	1.8	13.8
	Follow-On	8.5	8.4
	<u>Readiness and Sustainability</u>	3.5	-
	<u>Expenditures</u>	<u>43.3</u>	<u>-</u>
	Inventory Augmentation		
	Total BP-34	190.5	189.8

*NOTE: FOO is the requirement for retail levels to support increases in population.

4. POINTS OF INTEREST

- a. At the 45 TIR stock points, ASO and SPCC have visibility and access to not only their own wholesale assets, but also the retail assets at those sites. No other ICP's in DoD have such visibility of retail-level assets. The ICP access to consumer-level retail assets (except afloat) for referrals is limited to Issue Priority Designators (IPD) 1 and 2, and IPO3 NMCS/PMCS/CASREP requisitions. Intermediate-level retail inventories, except for Fleet Issue Load Lists (FILLs), can be referred by the ICP for IPDs 1-4 and IPD5 NMCS/PMCS/CASREP requisitions.
- b. The use of decentralized requisitioning and "after-the-issue-has-been-made" Transaction Item Reporting for Navy-managed, wholesale (and some retail) assets is unique among the DoD stock funds. The Army and the Air Force both employ central requisitioning to the ICP, who issues Materiel Release Orders (MROs) for wholesale stocks and has no control over retail assets. Navy ICP's find out daily what assets have been issued both wholesale and retail. Since some wholesale assets are issued on a decentralized basis, Navy ICPs only refer requisitions that do come to them, rather than issue MROs.
- c. ASO employs central requisitioning at Naval Air Stations, primarily because no intermediate-level assets exist at the Naval Supply Centers. That is, a NAS will directly requisition ASO rather than directly requisition the wholesale assets in the Aviation Department at its local NSC. In this sense ASO is 2-echelon, and SPCC is 3-echelon. Intermediate-level ASO stocks are carried at the Corpus Christi, Pensacola, and Cherry Point Air Stations. SPCC customers use central requisitioning when there is no intermediate source of supply. Decentralized access to wholesale assets occurs only in those cases where wholesale and retail assets are co-located, and then only because the wholesale/retail distinction is not made.
- d. The Navy (as of end of FY84) is the only Service managing depot-level-reparables in a stock fund (i.e., with obligation dollars rather than appropriated dollars). Ships reparables are managed within the NSF now, and aeronautical reparables are scheduled for inclusion in FY85.
- e. NAVSUP Publication OI-0530-LP-553-0000, INVENTORY MANAGEMENT, A Basic Guide to Requirements Determination in the Navy, contains a wealth of information on both wholesale and retail operations in the NSF.

OUTLINE 3. AIR FORCE
DOD STOCK FUND OPERATIONS
SYSTEMS SUPPORT DIVISION (SSD)

1. OVERVIEW

- a. Type Stock Fund: Wholesale with retail levels.
- b. Categories of Stock: Air Force centrally managed consumables; predominately Class IX (i.e., repair part) secondary items; includes field-level reparable.
- c. Scope of Operation:
 - Activities Managing Assets:
 - Wholesale: Six ICPs at five Air Logistics Centers (San Antonio, TX; Oklahoma City, OK; Sacramento, CA; Ogden, UT; Warner Robins, GA), plus AF Cryptollogical Support Center, Kelly AFB, TX.
 - Retail: Over 300 Air Force retail activities worldwide.
 - Inventory Control System:
 - Wholesale: Six ICPs employ a standard AF requirements system (D062) to compute all wholesale stock levels. Demands are processed through the AF Item Management Stock Control and Distribution System (D032) for item availability. Item managers employ varying levels of management intensity (item-specific review) based on dollar value of projected annual demands and demand frequencies.
 - Retail: Air Force bases employ the AF Standard Base Supply System (SBSS) for retail requirements and management. The Air Logistics Centers use the D033 Stock Control and Distribution System for depot supply requirements and management to support retail customers at the Centers, e.g., depot maintenance lines.
 - Stock Numbers Managed: 490,000 (all have levels).
 - Retail Demands: Approximately 2.7 million requisitions/year, (includes on estimated figure for depot customer demands on D033).
 - Wholesale Demands: Approximately 2.5 million requisitions/year (includes Air Force, rest of DoD and other customers).

- War Reserves: Additive levels, funded by appropriation. Pre-positioned materiel is stocked at retail level in addition to peacetime levels and assets. Other War Reserve Materiel (OWRM) is stocked at each of the Air Logistics Centers.

d. Performance:

- Objectives:

- Wholesale: Maintain inventories, sales and obligations within constraints imposed by Air Force/OSD. At each ICP, maintain aggregate safety level value equal to 55 days' worth of demand. Performance is compared against an 85 percent fill-rate goal for each ICP; however, this goal does not function as an objective in the computation of requirements.
- Retail: There are no overall retail performance effectiveness goals in written supply policy documentation. However, for CONUS bases, item safety levels are set to provide 84% probability that all demands in resupply cycle are met; 97% for selected weapon system items overseas. (NOTE: This is different from a fill rate objective in that only the resupply period is addressed; with such objectives implicit fill rate objectives will be higher.)

- Actual:

- Wholesale fill rates:

<u>FY81</u>	<u>FY82</u>	<u>FY33</u>
87.1%	86.3%	82.1%

- Retail (base) fill rates:*

<u>Issue Effectiveness</u> (Stocked + nonstocked)	<u>Stockage Effectiveness</u> (stocked only)
FY81: 61.7%	80.5%
FY82: 62.4%	80.6%
FY83: 62.3%	80.6%

*NOTE: Retail data from SBSS; does not include D033 data on support to ALC customers.

e. Management Structure:

- Policy: HQ USAF (Comptroller, and DCS Logistics).
- Overall Management: SSD Manager, HQ AFLC (Materiel Management).
- Intermediate Control: 17 Major Commands.

- Daily Operations: Five Air Logistics Centers, Cryptollogical Support Centers, and approximately 300 Air Force activities worldwide.
- Physical Storage:
 - Wholesale: vast majority located at the ALCs.
 - Retail: located at the retail activity.

f. Summary Budget Data (Source: FY85 BES) (\$ in Millions):

	FY83 Estimated Actual	FY84 Revised Proposed	FY85 Budget Estimate
1) Peacetime Inventory EOP (Note a.):			
Peacetime Operating Stocks	\$3,898.3	\$4,845.9	\$6,274.3
War Reserve	253.7	317.3	390.1
2) Obligation Authority:			
Operating	2,217.4	2,353.1	2,702.3
Augmentation	42.5	539.1	612.9
War Reserves	38.3	74.9	57.6
3) Net Sales (Note b.)	1,732.3	1,960.3	2,105.6
4) Net Customer Orders (Note b.)	\$1,742.3	\$2,000.3	\$2,125.6
5) Inventory Turnover (Sales/Peacetime Inventory)	.444	.405	.336
6) Credit from Wholesalers	N/A	N/A	N/A
7) Numeric Stockage Objective	412.9	463.7	486.2

NOTES:

- a. Peacetime Inventory includes both wholesale and retail inventory.
- b. Net Sales and Net Customer Orders represent actual sales/orders by retail customers; does not include value of intra-Air Force transfers of stocks from wholesale to retail activities.

2. INVENTORY MANAGEMENT

a. Wholesale/Retail Interface:

- The movement of assets from wholesale to retail supply points at AF bases is accomplished by transfer within the SSD, rather than by sales. Except for Stock Number User Directory information, transaction history data on recent shipments, and retail reports on turns-ins, wholesale item managers do not have visibility of base level retail assets.

- At the AFLC depots (ALCs), the retail D033 system processes local customer requisitions and orders SSD stock replenishment from the wholesale D032 system. In addition to their visibility of wholesale assets under D032, wholesale item managers also have visibility of some retail D033 assets, namely those co-located at the ALC serving as the inventory control point.

b. Stockage Criteria:

- Wholesale:

- Range: During the acquisition process for new end items, optimal-level-of-repair analysis (ORLA) and Source Coding Conferences determine whether an item will be an AF-managed consumable.
- Depth: Item levels at each ICP are computed by a standard model that employs cost minimization and backorder constraints in line with DoDI 4140.39. Item managers can apply Peacetime Program Ratios (which may be greater or less than one) to factor demand rates input to the model. These PPRs are used when the item's usage can be tied to increasing or decreasing activity (e.g., flying hours) for the end item. The model also provides for the inclusion of NSO and insurance levels for items with low or no expected demand. In addition to these levels, provisions are included for computing quantitative requirements (QR) for both demand and non-demand based items. QR levels are used for a variety of purposes including: follow-on provisioning not amenable to the use of PPRs; reprovisioning; new provisioning (including, when there is a projected increase of 25 percent or more in the end item population, wholesale procurement of stock to be transferred to retail levels as initial spares support lists (ISSLs); unprogrammed workloads and depot repair program increases; life-of-type buys, and FMS initial spares. QR levels represent "one-time" requirements, rather than levels to handle recurring demand.

- Retail:

- Base Supply: Range at base retail supply points is computed within the SBSS using a cost-to-stock vs. cost-not-to-stock range model in line with DoDI 4140.45. The SBSS depth calculation sets levels to provide certain probabilities that all demands in the resupply cycle are met, (as described in section 1d above); it does not employ a cost minimization, backorder constraint depth model.

Special levels for items with low or no demand history can also exist at the retail level. These special levels include ISSLs (38% of dollar value); life-cycle retention levels (24% of dollar value); and other special levels (38% of dollar value).

- Depot Supply: Range and depth for retail materiel in support of depot maintenance is computed at each ALC. These levels are computed as the greater of normal demand-based levels or maintenance-computed level requirements. The levels have appeared as depot supply levels in the wholesale stratification, but will be classified as retail beginning in December 1984.

c. Asset Visibility: See wholesale/retail interface discussion above (Section 2a.).

d. Sources of Stocks:

- Wholesale: Obtained entirely from commercial vendors or local manufacture.
- Retail: Obtained from the six AF ICPs.

e. Inventory Levels:

1. Wholesale Levels:

a. Recurring Requirement Objectives (in days):

	FY83 <u>EST ACT</u>	FY84 <u>PROP</u>	FY85 <u>BES</u>
1) Safety Level	55	55	55
2) Admin Leadtime	132	122	122
3) Production Leadtime	409	391	391
4) Procurement Cycle Requirement	52	14	14

b. Other Requirement Objectives (\$ million)

	FY83 <u>EST ACT</u>	FY84 <u>PROP</u>	FY85 <u>BES</u>
1) Provisioning	180.6	429.1	700.6
2) Numeric Stockage Objective	412.9	463.7	486.2
3) Due-Out	243.9	320.3	355.7
4) ALC Additive	237.3	941.6	1065.8

c. Reorder Level Deficit Additive
(\$ in Millions) -0- 535.6 788.2

2. Retail Levels (in days):

	FY83 <u>EST ACT</u>	FY84 <u>PROP</u>	FY85 <u>BES</u>
a) Safety Level	60	59	59
b) Retail O&ST	23	23	23
c) Operating Level	26	26	26
d) Repair Cycle	8	8	8

3. Retail Special Levels - FY83 gross requirement: \$77.4 million

4. Inventory Augmentation-Wholesale and Retail: (\$ million)
(Requirements included in levels above)

	FY83 <u>EST ACT</u>	FY84 <u>PROP</u>	FY85 <u>BES</u>
a) Force Modernization	129.2	357.3	446.6
b) Force Modification	33.1	95.0	52.8
c) Readiness/Sustainability	<u>277.7</u>	<u>786.9</u>	<u>15.7</u>
Total Inventory Augmentation	\$440.0	\$1,239.2	\$515.1

3. FINANCIAL MANAGEMENT

a. Budget Process:

- Budget Submission (BES):

-- Developed by: SSD Manager, HQ AFLC. Wholesale portions are based on line item stratifications generated by each ALC, plus ALC additives addressing provisioning, life-of-type buys, and other nondemand-based inputs. Retail stratification from base-level data are consolidated at HQ AFLC to build the Table III retail stratification. The SSD Manager consolidates the wholesale and retail requirements into the SSD budget submission.

-- Reviewed by: HQ USAF/Logistics
HQ USAF/Comptroller

-- Approved by: HQ USAF/Comptroller for submission to OSD.

- Apportionment and Mid-year Reviews:

-- Developed by: HQ USAF/Comptroller with SSD Manager, WPAFB and HQ USAF Logistics input.

-- Reviewed by: HQ USAF/Logistics
HQ USAF/Comptroller

-- Approved by: HQ USAF Comptroller. (SF 1105 actions are approved by the SEC AF/Financial Management).

b. Approved Programs:

- HQ USAF/Comptroller receives SF 1105 from OSD Comptroller channels.
- HQ USAF/Comptroller forwards Approved Program (letter format) with Public Law RS 3679/31 USC 1341a responsibility to SSD Manager, HQ AFLC.
 - The Approved Program specifies division operating constraints (e.g., not-to-exceed Obligation Authority, On Hand Inventory values, and Orders-to-Sales ratios). The SSD Manager breaks out the wholesale portion and forwards to the ICPs including Obligation Authority, other constraints. Public Law 3679/4341a responsibility for obligations is retained by the SSD manager.

c. Cash Management:

- SSD cash has separate identity in the accounting system, but only total stock fund cash is managed to a specific number of days.
- Public Law 3679/1341a responsibility for cash management is retained by AF/Comptroller.

d. Pricing:

- Wholesale: The pricing mechanism in the wholesale stock fund is designed to target the average percentage change in stock fund prices (from one year to the next) to equal the inflation/deflation rate budgeted in the Operations and Maintenance (O&M) account. The gains or losses of stock fund cash resulting from the difference between inflation/deflation experienced for stock fund procurements and the projected inflation/deflation built into stock fund prices and the O&M accounts are accommodated in subsequent year price updates. The accommodation of the gains and losses is based on a three-year cycle, i.e., gains or losses experienced in FY83 would normally be reflected in the FY85 price update. The Air Force does not perform an item-by-item check to see whether the Price Stabilization Rate (PSR) does in fact produce new prices in line with the O&M target. Instead a statistical check using average prices is done to obtain an estimate of the change in prices, and the PSR is set so that this estimated change conforms to the budgeted O&M increase/decrease.
- SSD FY83 Surcharges:

Transportation	1.0%
Obsolescence/Inventory Loss	8.0
Price Stabilization	<u>14.8</u>
Total	23.8%
- Retail: Standard price is set by the wholesale item manager. SSD distributes the standard price to its retail outlets via AUTODIN.

e. Obligation/Order Authority:

- In the SSD, Obligation Authority received from HQ USAF/Comptroller is distributed by the SSD Manager, HQ AFLC to each of the inventory control points. The SSD manager monitor commitments to avoid RS3679 violations.

f. Wholesale/Retail Interface:

- Movement of assets at an ALC from wholesale (D032) to retail (D033) is not a transfer or a sale; assets simply move from one account to another without any financial (in terms of budget) transaction.
- Transfers: The SSD is a vertical stock fund; therefore, movement of material from the wholesale account to the retail account of a non-AFLC activity (e.g., other than an ALC) is recorded as a transfer, not a sale.
- Sales: The issue of materiel from a non-AFLC retail activity to a customer is recorded as a retail sale. The issue of materiel from an AFLC retail account (an ALC) to depot maintenance and other base customers is recorded as a wholesale sale. The issue of SSD materiel from the wholesale account to non-Air Force customers (e.g., other Services, FMS) is recorded as a wholesale sale.
- Wholesale demand (used to set wholesale levels) is the sum of wholesale sales (plus or minus change in wholesale back-orders), and transfers from wholesale to non-AFLC retail activities.
- SSD sales are the sum of retail and wholesale sales.

g. SSD Customers in 1983 (Source: Exhibit SF-6, FY85 BES)
(\$ in Millions):

	FY83 <u>EST ACTUAL</u>	PERCENT <u>GROSS SALES</u>
1) DoD Components		
- Procurement (acft, etc.)	\$ 15.1 M	.80%
- O&M (Active, Guard, and Reserve bases)	447.2	23.34
- Depot Main Industrial Funds	791.8	41.33
- Other Industrial Fund (MAC)	87.3	4.56
- Army	11.2	.58
- Navy	140.5	7.33
- Grant Aid	1.1	.05
- Other DoD	1.7	.09
DoD Sub Total	(\$1,495.9)	(78.08%)

	FY83 EST ACTUAL	PERCENT GROSS SALES
2) Other Agencies (NASA, DOE)	6.6	.34
3) Trust Funds (FWS)	229.5	11.98
4) Other	.3	.02
Total Net Sales	(\$1,732.3)	(90.42%)
5) Credits (to Customers)	183.6	9.58
Total Gross Sales	\$1,915.9M	100.0%

h. Inventory Maintenance:

- Inventory Maintenance surcharges cover all inventory growth not included in peacetime inventory augmentation.
- No Inventory Maintenance surcharge was calculated in the FY84 and FY85 price updates.

i. Requisitioning/Financial Procedures

- Customer Obligations
 - Prior to 1 October 84, customers obligated funding when materiel was issued.
 - Commencing 1 October 84, customers will obligate funding when materiel is requested.
- Customer Backorders
 - Requests for materiel that is not-in-stock or is not-stocked are backordered at the local retail level. All non-stocked and selected (high priority) not-in-stock requisitions are passed to the wholesale level through the retail stock fund and result in transfers of materiel from the wholesale system to the retail system.
 - Customer backorders are satisfied from the earliest receipt of materiel (either normal stock replenishment or the receipt of the specific backordered requirement).
- Customer Materiel Returns for Credit:
 - When a wholesale level falls below the computed AFAO, retail bases are automatically notified on a monthly basis via AUTODIN that SSD customers are to be furnished credit upon turn-in by means of a Credit Indicator turned on at the retail level.
 - Materiel returns to the retail level result in customer O&M/Industrial funds being credited when the Credit Indicator is on.

- SSD provided \$135.2 million in credits to customers in FY83.
- Customer Materiel Returns -- No Credit:
 - Customer materiel returns resulting in no credit (credit indicator is off at retail stock point) are reported via AUTODIN to the wholesale IM for disposition.
 - Customer materiel returns without credit amounted to \$116.5 million in FY83.
- Retail Stock Point Materiel Returns for Credit: Not applicable. Assets returned by the retail activity to wholesale are transfers, not returns for credit.
- Inventory Adjustments:
 - Gains and losses through 30 September 1983 reflect a \$1.98 million net loss for Physical Inventory Adjustments.

j. Inventory Augmentation:

- Inventory Augmentation is defined by fiscal year in both POM and budget submissions. Exhibit SF-3a, FY85 BES provides a breakout of Inventory Augmentation, by weapon system, for FYs 83, 84, and 85.
 - Force Modernization, largely new weapon provisioning, is broken out by initial stock supporting new system procurements, and follow-on stock for system expansion (e.g., expansion of the F15 and F16 fleets in FY83, 84, and 85).
 - Force Modification requirements provide follow-on support after a fielded end item is modified. Details of sub-system enhancements, accomplished largely at depot or on contract, are provided in the FY85 BES narrative by weapon system.
 - Readiness requirements include initiatives to improve current levels of peacetime supply support. In this category the FY85 BES identifies the initiative to buy a minimum of one-year EOQ for items with stable demands. The initiative to enlarge the EOQ required an additional net investment of \$203 million. The gross-investment requirement was offset by an assumed price break of 15 percent associated with the larger quantity purchases.

4. SIGNIFICANT POINTS OF INTEREST

- a. The Systems Support Division of the AF stock fund is defined by the fact that it manages all hardware items for which the Air Force is the stock fund wholesaler. This distinguishes the SSD from other divisions in other DoD stock funds, which tend to be organized along commodity/command lines, rather than treating all hardware items together.

- b. SSD central management at HQ AFLC focuses more on financial performance (obligation and commitment targets) than supply performance (fill rates). The 85 percent wholesale fill rate goal is only used in historical evaluations of system performance. It is not used as the basis for determining requirements nor does it apply in the central operating guidance and controls that HQ AFLC provides to the ALC's. At the ALC level, supply managers do monitor fill rate performance and customer support.
- c. Of note on the subject of objectives is AFLC pursuit of an "EOQ-METRIC" study. In its initial stages, this study will address setting consumable item levels based on end item availability. Knowledge of indenture (part-to-next-higher-assembly) relationships is essential to its success.
- d. The SSD has established an automated system to notify its retail stock points when to allow credit on customer returns. When a wholesale stock level falls below the AFAO, a credit return indicator notice is automatically provided each of the retail sites via AUTODIN. Likewise, once the AFAO level is achieved, notices are provided to revoke the credit return provision. With this system, credit decisions are made at the retail level without interrogating the ICP.
- e. Although defined in Exhibit SF-3A, FY85 BES, Inventory Augmentation requirements are not separately computed and therefore cannot be separated from normal operating requirements in Exhibit SF-3. Thus, Inventory Augmentation requirements are included in Exhibit SF-3 as Other Operating/Inventory Augmentation Objectives (Line F5), and as Safety, O&ST, Operating and Repair levels (Line F1 - F4).

OUTLINE 4. DEFENSE LOGISTICS AGENCY
(DLA)

1. OVERVIEW

- a. Type Stock Fund: Wholesale, serving retail customers throughout DoD.
- b. Categories of Stock: DLA centrally managed consumables (including some field level reparables) divided into the following commodities: construction, electronic, industrial, fuel, personnel support, and general supply items.
- c. Scope of Operation:
 - Eight ICP's:
 - Defense Construction Supply Center (DCSC), Columbus, OH
 - Defense Electronics Supply Center (DESC), Dayton, OH
 - Defense Industrial Supply Center (DISC), Philadelphia, PA
 - Defense Fuel Supply Center (DFSC), Cameron Station, VA
 - (3 ICPs) Defense Personnel Support Center (DPSC), Philadelphia, PA
 - Defense General Supply Center (DGSC), Richmond, VA
 - Six DLA-owned depots, providing warehousing and shipment services:

Mechanicsburg, PA	Tracy, CA
Memphis, TN	Columbus, OH
Ogden, UT	Richmond, VA
 - DLA-owned stocks also stored at many Army, Navy, Marine, and Air Force installations.
 - DLA has a Weapon System Support Program (WSSP) providing special management attention to about 450,000 items identified by the Services as essential to weapon system support.
 - Inventory Control System: The Standard Automated Materiel Management System, (SAMMS), provides inventory visibility, disbursement and sales accounting, supply performance indicators, and requirement projections at all ICPs, except those for fuels and subsistence.
 - Stock Numbers Managed: 2.3 million (more than half of the total NSNs in DoD).

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- Stock Numbers Stocked: 1.7 million.
- Annual Demand: (FY83) 21 million requisitions for stocked items
29 million for stocked and non-stocked.
- War Reserve Assets: Additive levels, funded by appropriation, and stored as OWRM at DLA and Service depots. Some fuel and subsistence WRM is prepositioned.

d. Performance:

- Objectives: Supply availability (percentage of requisitions for stocked items filled on first pass) goals ranging from 91% to 97% by commodity are used to evaluate performance, but are not used to compute levels requirements in SAMMS, except in the case of the WSSP. For the WSSP, the Materiel Readiness Support System (MARS) computes safety level requirements, by item, to achieve supply availability goals currently set in the 92% - 93% range, and passes those levels to SAMMS. ICP's also track (with SAMMS) average days-to-release for backorders.
- Actuals:
 - Supply availability rates for the four ICPs handling hardware, repair-part-type items (Source: FY85 Budget Estimates):

	<u>FY81</u>	<u>FY82</u>	<u>FY83 (thru July '83)</u>
DESC	90.1%	90.7%	92.6%
DCSC	91.4%	90.5%	90.1%
DISC	89.6%	90.9%	90.5%
DGSC	87.3%	90.3%	92.7%

(Data by Supply Center showing average lines on backorder is also included in Budget Estimate submissions.)

e. Management Structure:

- Policy: HQ DLA (Supply Policy and Comptroller).
- Overall Management: HQ DLA.
- Intermediate Control and Daily Operations: Eight ICP's.
- Physical Storage: Storage of ICP assets is not centralized; assets are distributed and stored at all six DLA supply depots, and at Service-owned depots and installations. SAMMS is integrated to provide overall visibility of wholesale assets to the ICP.

f. Summary Budget Data (Source: FY85 Budget Estimates) (\$ in Millions):

	FY83 EST. ACTUAL	FY84 REVISED PROPOSED	FY85 BUDGET ESTIMATE
1) Peacetime Inventory End of Period			
Peacetime Operating Stocks			
DESC	1,266.5	1,332.4	1,480.0
DCSC	949.4	1,081.7	1,220.8
DISC	903.6	1,080.3	1,208.2
DGSC	<u>846.2</u>	<u>964.5</u>	<u>1,045.9</u>
Total	3,965.7	4,458.9	4,954.9
War Reserves			
DESC	19.2	21.2	22.7
DCSC	19.2	20.6	21.1
DISC	6.4	6.4	6.4
DGSC	<u>22.8</u>	<u>24.0</u>	<u>25.1</u>
Total	67.6	72.2	75.3
2) Obligation Authority			
Operating			
DESC	619.7	671.0	763.7
DCSC	825.0	968.5	843.8
DISC	597.0	679.0	662.0
DGSC	<u>735.8</u>	<u>869.2</u>	<u>838.7</u>
Total	2,777.5	3,187.7	3,108.2
Augmentation			
DESC	--	--	59.5
DCSC	--	--	50.2
DISC	--	--	21.2
DGSC	--	--	<u>25.9</u>
Total			156.6
War Reserves			
DESC	1.3	--	--
DCSC	--	--	--
DISC	--	--	--
DGSC	<u>24.1</u>	<u>23.6</u>	<u>23.3</u>
Total	25.4	23.6	23.3

	FY83 EST. ACTUAL	FY84 REVISED PROPOSED	FY85 BUDGET ESTIMATE
3) Net Sales			
DESC	600.0	656.0	652.0
DCSC	779.0	881.0	847.5
DISC	632.8	654.0	626.0
DGSC	<u>805.4</u>	<u>831.6</u>	<u>835.9</u>
Total	2,817.2	3,022.6	2,961.4
4) Net Customer Orders			
DESC	593.0	653.0	652.0
DCSC	770.2	881.0	847.5
DISC	639.3	654.0	626.0
DGSC	<u>788.0</u>	<u>831.6</u>	<u>835.9</u>
Total	2,790.5	3,019.6	2,961.4
5) Inventory Turnover (Sales/Peacetime Inventory)			
DESC	.474	.492	.441
DCSC	.821	.814	.694
DISC	.700	.605	.518
DGSC	<u>.951</u>	<u>.862</u>	<u>.79</u>
Overall Ratio	.710	.678	.598
6) Numeric Stockage Objectives			
DESC	161.9	169.0	159.0
DLSC	133.6	138.7	132.1
DISC	47.9	47.9	45.8
DGSC	<u>52.3</u>	<u>63.4</u>	<u>63.8</u>
Total	405.7	419.0	400.7

2. INVENTORY MANAGEMENT

a. Stockage Criteria:

- Demand Based: Generally any item with 12 or more demands per year (predicted, expected, or actual) will be classified as a demand item requiring demand-based levels.

-- Range: The Services decide which items will be managed by DLA, either by Source Coding Conference during the acquisition and provisioning phases for new-end items, or by establishing item transfer programs to DJA.

- Depth: DLA employs (within SAMMS) a standard, cost minimization, backorder-constrained EOQ/VSL model as specified in DoDI 4140.39. Levels are computed based on historical demand; program ratios to factor projected changes in demand are not used (largely due to the large degree of commonality for DLA-managed items, and the difficulty this creates in clearly projecting overall program changes); the model does allow for the inclusion of Supply Support Requests (SSRs), appropriately time-phased, to support non-recurring materiel requirements of Service-initiated programs. For items in the WSSP, levels are still computed with a 4140.39-type model, but with an item backorder constraint determined by a fill-rate objective for each item.
- Non-demand Based: For items with projected annual demands of less than 12, DLA will stock the items as NSO. If items are new, NSO requirements are set based on the Service request. For items being reclassified NSO due to lack of demand, the rules vary by Supply Center.
- For the "hardware" Supply Centers (DFSC, DCSC, DISC, and DGSC), a snapshot of FY84 on-hand and on-order inventory showed a total value of \$5.2 billion, of which \$1.1 billion was classified as NSO. The difference between the \$1.1 billion and the NSO objectives of \$419 million cited in Section 1f. is accounted for by "inapplicable" NSO assets in the stratification categories of economic or contingency retention. Many of these inapplicable NSO assets are weapon system support items, or provisioning items that DLA is required to retain. Subject to current policy guidance, assets are also considered for disposal, as well.
- b. Asset Visibility: SAMMS provides item managers complete visibility of all DLA-owned assets, regardless of storage location.
- c. Sources of Stocks: Commercial vendors and manufacturers.
- d. Inventory Levels: (in days) (Source: FY85 Budget Estimates)

	FY83 EST. ACTUAL	FY84 PROPOSED	FY85 BUDGET ESTIMATE
1) Safety Level			
DESC	83	83	83
DCSC	75	115	115
DISC	74	74	74
DGSC	88	91	91

	<u>FY83</u> <u>EST. ACTUAL</u>	<u>FY84</u> <u>PROPOSED</u>	<u>FY85</u> <u>BUDGET ESTIMATE</u>
2) Administrative Leadtime			
DESC	128	128	128
DCSC	136	136	136
DISC	105	105	105
DGSC	112	109	109
3) Production Leadtime			
DESC	218	218	218
DCSC	234	234	234
DISC	235	235	235
DGSC	190	190	190
4) Procurement Cycle			
DESC	98	87	95
DCSC	98	98	98
DISC	114	114	114
DGSC	95	95	95
5) Other Operating Inventory Objectives (\$ million)			
DESC	307.9	320.7	291.2
DCSC	273.7	295.6	184.8
DISC	193.9	199.5	191.8
DGSC	116.1	97.9	79.9

3. FINANCIAL MANAGEMENT

a. Budget Process:

- Budget Estimate Submission (BES): Developed and submitted by each Supply Center, going through HQ DLA. (FY86 BES will include a DLA-wide roll-up.).
- Apportionment and Mid-Year Review: Conducted simultaneously each year as a matter of course. Initiated by call-letter from HQ DLA to Supply Centers, with guidance and adjustments specified, based on President's budget.

b. Approved Programs:

- HQ DLA receives DD 1105 from OSI Comptroller.
- HQ DLA parcels program out with obligational authority allotments to DSC's, with P.L. 3679 responsibility for obligations held by the Supply Center commander.

- At the DSC's, operation within allotted O/A constraints is tracked and reported by SAMMS. Managers use indicators such as obligations-to-sales ratios to monitor projected financial position.

c. Cash Management:

- DLA cash has a separate identity by DSC for accounting purposes, but only the total DLA stock fund cash balance is managed to a specific number of days. SAMMS does not report or control cash balances in the DLA stock fund. Cash is tracked and monitored by a separate accounting system at HQ DLA.
- P.L. 3679 responsibility for cash management is retained by the DLA Comptroller.

d. Pricing:

- Price Stabilization: The price stabilization mechanism targets average percentage change in prices to customers from one year to the next to equal the inflation/deflation budgeted for customer Operations and Maintenance (O&M) accounts. Gains and losses from Price Stabilization Rate (PSR) procedures are accommodated by price adjustments to customers two to three years later. DLA computes its PSR factor with an item-by-item, bottom-up process that initially computes a separate factor for each item, and then sets the single PSR to be equal to the average value of all the item PSR's, weighted by the projected item sales. PSR's for fiscal years 1984 and 1985, from the FY85 Budget estimates by Supply Center are:

	<u>FY84</u>	<u>FY85</u>
DESC	11.9	(1.9)
DCSC	11.9	(1.9)
DISC	5.2	9.6
DGSC	11.9	(1.9)

- Surcharges: In addition to Price Stabilization, DLA employs the following surcharges in setting prices: wholesale losses (includes obsolescence) and retail losses (reimbursed to retail supply to provide retail a means to pay for losses and still pass through the stabilized wholesale price), first and second destination transportation, and inventory maintenance. The inventory maintenance surcharge (2.6% for FY85, and 1.8% for FY86) is to cover unprogrammed, but nevertheless anticipated, changes in inventory. The value is set based on historical changes in levels for recurring demand items.

Surcharges in FY83, by Supply Center:

	<u>DESC</u>	<u>DCSC</u>	<u>DISC</u>	<u>DGSC</u>
Inventory Losses	5.0	3.0	5.0	5.0
Transportation	6.1	5.6	6.1	6.6
Inventory Maintenance	-0-	-0-	-0-	-0-
Price Stabilization	10.9	10.0	10.9	10.9

e. DLA Customers in 1983 (Source: FY85 Budget Estimates)
(\$ in Millions):

	<u>DESC</u>	<u>DCSC</u>	<u>DISC</u>	<u>DGSC</u>
1) DoD Components				
Army	87.2	201.8	101.8	224.1
Navy	207.4	335.7	283.9	263.8
Air Force	193.5	143.3	179.8	247.9
Marine Corps	8.6	27.2	6.8	22.1
Other DoD	<u>4.4</u>	<u>2.3</u>	<u>6.9</u>	<u>17.4</u>
DoD Subtotal	501.1	710.3	579.2	775.3
2) Other Federal Agencies	14.8	7.8	5.6	9.9
3) Trust Funds (FMS)	84.0	60.8	48.0	19.5
4) Other	<u>.1</u>	<u>.1</u>	<u>-0-</u>	<u>.7</u>
Net Sales	600.0	779.0	632.8	805.4
5) Credits and Allowances (to customers)	<u>38.0</u>	<u>42.1</u>	<u>30.7</u>	<u>24.6</u>
Total Gross Sales	638.0	821.1	663.5	830.0

f. Inventory Maintenance: See section 2d. on pricing and surcharge for a description of DLA's approach to inventory maintenance.

g. Requisitioning/Financial/Credit Procedures:

- Customer Backorders: Upon receipt of replenishment stocks or spot buy, DLA fills customer backorders based on Issue Priority Group codes.
- Customer Returns for Credit:
 - DLA provides credit for return when a wholesale requirement exists and no credit otherwise. SAMMS contains a credit information and return system allowing customers to determine the credit/disposal status of their excess items.

- The four hardware Supply Centers provided \$126.9 million in credits for customer returns in FY83, with the following amounts by Center:

DESC: \$33.6 million	DISC: \$30.0 million
DCSC: \$41.3 million	DGSC: \$22.0 million

- The four hardware Supply Centers had customer returns without credit totalling \$176.3 million in FY83, with the following amounts by Center:

DESC: \$49.7 million	DISC: \$38.0 million
DCSC: \$59.6 million	DGSC: \$29.0 million

h. Inventory Augmentation:

- Inventory augmentation is shown by fiscal year in exhibit SF-3a of budget estimate submissions. Inventory augmentation requirements for the four hardware Supply Centers appeared for the first time in the FY85 BES, with requirements beginning in FY 1985.
- All inventory augmentation requirements computed by the four hardware Centers to date are either provisioning requirements in the Force Modernization category, or Readiness and Sustainability initiatives for items in the Weapon System Support Program. No Force Modification augmentation requirements have been established. DLA's provisioning estimates are hampered by the fact that Supply Support Requests from the Services for provisioning tend to be submitted long after budgets are prepared.
- FY85 inventory augmentation requirements, by Center, in the FY85 BES were: (\$ million)

	<u>Force Modernization</u>		<u>Readiness</u>
	<u>Initial</u>	<u>Follow-on</u>	<u>Sustainability</u>
	<u>Provisioning</u>	<u>Provisioning</u>	<u>in WSSP</u>
DESC	30.0	9.0	40.7
DCSC	97.9	0	21.2
DISC	15.6	0	18.5
DGSC	20.4	-0-	21.2

NOTE: These figures reflect total augmentation requirements -- both funded and unfunded. The augmentation amounts shown in Section 1f. reflect the portion for which funding is proposed.

4. SIGNIFICANT POINTS OF INTEREST

- a. In its structure and operation, the DLA stock fund is the "textbook" stock fund within the DoD. It has only one echelon of supply, namely its own wholesale levels; it does not "sell" or transfer to

itself; and its relationship with its customers is most business-like in terms of financial transactions and inventory management. As such, DLA represents a good test case for examining the effects of policy and management initiatives for the stock funds in the DoD.

- b. The exception to the "textbook" assertion above is in the area of inventory augmentation. As a wholesaler that doesn't see the effects of force structure growth and modernization until the Services identify DLA as the item manager and present DLA with Supply Support Requests, DLA necessarily lags in being able to accurately quantify true inventory augmentation requirements.
- c. With its Weapon System Support Program and direct vendor-to-customer requisitioning and shipping initiatives, DLA is doing interesting work in responding to readiness-related, customer-support-oriented initiatives in DoD.
- d. The high degree of commonality among DLA-managed items, coupled with lack of cross-Service integration of maintenance programs tends to deny DLA the use of program ratios as a tool to adjust requirements.

OUTLINE 5. ARMY MAJOR COMMANDS
RETAIL DIVISIONS

1. OVERVIEW:

- a. Type Stock Fund: Retail only.
- b. Categories of Stock: Army, Navy, Air Force, GSA, DLA managed consumables and selected reparable and locally procured consumables.
- c. Scope of Operation:
 - Activities Managing Assets:
 - Officially designated Army Stock Fund (ASF) Retail Divisions (home offices) -- usually Major Commands (MACOM).
 - The ASF retail divisions are U.S. Army Europe (USAREUR); Forces Command (FORSCOM); Training and Doctrine Command (TRADOC); Eighth U.S. Army (USAEIGHT) (Korea); Western Command (WESTCOM) (Hawaii); U.S. Army, Japan (USARJ); Army Materiel Command, Installations Division (AMC ID); Defense Supply Service Washington (DSSW); and U.S. Army Commissary Resale Division (USACORD). (Note: USACORD, USARJ, AMC (ID) and DSSW are excluded from this study).
 - Inventory Control System:
 - Army installations use the Standard Army Intermediate Logistics System (SAILS) for retail requirements computation and fiscal and supply management.
 - Retail demands: Do not depict actual demands. Only demands for non-Direct Support System (DSS) customers are reflected. (See 2, Inventory Management.)
 - War Reserve: Additive levels, funded by appropriation. Stocks at retail level are in addition to peacetime levels and assets.
- d. Performance: Performance indicators for retail (installation) stock fund activities as well as for OMA-funded supply activities are directed in current Army Regulations. These include, but are not limited to, demand accommodation, demand satisfaction and gross availability goals. The current management systems, however, do not accurately measure these indicators. In SAILS, only supply data on non-DSS customers is accumulated and in the customer system, (DS4) Quick Supply Store (QSS) items are not measured. Thus both systems are skewed and do not reflect actual supply support performance.

U.S. Army Logistics Center is reviewing these problems at the present time.

- Other performance data such as requisitioning and receipt processing times, percent of zero balances with due-out, percent of warehouse denials, number of high-priority requisitions and number of daily cycles are maintained and reviewed. These are retained at MACOM level, by unit or installation, and not consolidated nor averaged.

e. Management Structure:

- Policy: HQDA (ODCS Logistics and Comptroller).
- Overall Management: Program Director for the Army Stock fund is the DCSLOG, HQDA.
- Intermediate Control: Eight MACOMS (home offices) and U.S. Army Troop Support Agency (USACORD).
- Daily Operations: Installations (branch offices) within the MACOMs (e.g., at Army bases).
- Physical Storage: AMC Depots and MACOM installation supply divisions (ISD).

f. Summary Budget Data: See Attachments A-E for ASF Retail Division budget data.

2. INVENTORY MANAGEMENT

a. Wholesale/Retail Interface:

- Direct Support System (DSS): The Direct Support System (DSS) was established in the mid-1970s by the Army in an effort to reduce stockage levels in Europe, reduce cost of overseas depots and reduce order-ship time (OST) between the supply source and end-user. DSS has since expanded to a world-wide distribution system which can be applied to any Supply Support Activity (SSA). All Army wholesale and Defense Logistics Agency supplies can be distributed by DSS. It can be used by a tactical, table of organization and equipment (TOE) unit or a table of distribution activity (TDA) organization as long as they are an SSA with an authorized stockage list (ASL). Under the DSS system the retail stock fund carries a range and depth of materiel designed to support only non-DSS customers.

The wholesale ASF operates under AMC's Commodity Command Standard System. Retail ASF branches use the Standard Army Intermediate Logistics System (SAILS). Army OMA customers have a variety of automated systems which compute levels, reorder points, safety levels, etc. (Army combat divisions use DS4.)

Fundamentally, DSS operates in the following manner in conjunction with DS4, SAILS and CCSS.

- Customers use DS4 (or similar systems) to transmit requisitions into SAILS (Retail stock fund). Customer obligates OMA funds to the retail division stock fund at that time.
- SAILS captures both a fiscal requirement (customer order) for the retail stock fund and a supply demand. If the customer is supported under DSS, the supply demand is not used to compute supply levels; however, the customer order is used in computing retail stock fund obligation authority. For high-priority requirements, the retail stock fund will issue materiel to a DSS-supported customer, but this demand is still not used to compute retail levels. Requisitions from supported units (non-DSS customers) for not-in-stock and not-carried materiel and all lower-priority requisitions from DSS units are passed to the wholesale system citing retail stock fund obligation authority.
- The wholesaler (either Army or DLA) directs the appropriate depot to ship directly to the installation central receiving point (or drop point). When the item arrives at the receiving point it is picked up by the OMA customer, and not physically washed through the Installation Supply Division (retail stock fund). After-the-fact documentation is sent to the retail stock fund to confirm receipt for expensing purposes and to record a retail stock fund sale. This transaction then creates a wholesale sale (to retail stock fund) and a retail sale (to OMA account).
- Movement of assets from wholesale to retail is accomplished by customer sales as outlined above. After the sale to an OMA customer, the wholesale item manager and the retail stock fund have no visibility of the asset.
- Retail materiel category item managers have visibility only of stocks physically on-hand in installation storage (retail stock fund assets). They do not have visibility of items after sale to the OMA funded end-user (DSS or non-DSS).

b. Stockage Criteria:

- Range and depth of items (demand based) are computed by SAILS which complies with DoDI 4140.45. Special levels (non-demand based) such as item essentiality, insurance, seasonal requirements and numeric stockage objective are also maintained in the retail stock fund.

c. Asset Visibility: (See Wholesale/retail interface discussion above -- Section 2a.)

d. Source of Retail Stocks:

- Retail stocks are purchased from DLA, other service stock funds, the Army Wholesale Stock Fund and locally procured.

e. Inventory Levels: See Annexes A through E for ASF Retail Division Levels.

3. FINANCIAL MANAGEMENT

a. Budget Process:

- Budget Submission (BES):
 - Developed by: Individual Stock Fund Branches (Installation) based on line item stratification. Branches submit to Major Command Stock Fund Divisions (MACOM). MACOM Stock Fund managers review, consolidate and forward to Headquarters DA.
 - Reviewed by: HQDA/ODCSLOG
HQDA/Comptroller.
 - Approved by: HQDA ODCSLOG/Comptroller for submission to OSD.
- Apportionment and Mid-year Reviews: Same of Budget Submission.

b. Approved Programs:

- HQ DA/ODCSLOG/Comptroller receive SF 1105 from OSD Comptroller.
- HQ forwards Approved Program (message format) to Retail Divisions but retains Public Law 3679/1341a responsibility for cash. (Message will also provide rationale for changes and specific guidance to Divisions.)
- Retail Divisions provide Approved Programs (including obligation authority) to Retail Branches (installations) but retain Public Law 3679/1341 responsibility for obligations.

c. Cash Management

- Retail Divisions (MACOM) have overview of cash to a specific number of days to branch (installation) level.

d. Pricing:

- Standard price is set for all items, including local purchase, by wholesale manager. Provided to installations by Army Master Data File (AMDF). Updated annually or as needed for significant changes on a monthly basis (e.g., price, source code, class of supply, etc.).

e. Wholesale/Retail Interface: (See wholesale/retail interface discussion. Section 2a.)

- f. Retail Customers in 1983: See Annexes A through E.
- g. Inventory Maintenance: Inventory Maintenance Surcharge is only applied at wholesale level; retail requirements (since all materiel is sold from wholesale to retail) are not included in the wholesale computations.
- h. Requisitioning/Financial Procedures:
 - Customer Obligations:
 - Prior to 1 October 1983, customers obligated when materiel was issued.
 - After 1 October 1983, customer obligates when materiel is requisitioned.
 - Customer Backorders:
 - Requests for materiel that are not satisfied at branch (installation) retail level are backordered at the local retail level. Customers under the Direct Support System (DSS) receive materiel directly from the wholesale system. Non-DSS customers' backorders are filled from the earliest receipt of materiel.
 - Customer Materiel Returns for Credit:
 - MACOMs provide a quarterly update to customers indicating a standard percent of credit which will be provided by wholesale materiel category.
 - Customer returns to retail stock funds where there is a retail need for retention will receive 100% credit for serviceable items. Unserviceable items: 100% minus cost of repair. Customer would receive at least standard percent even when items are excess to wholesale/retail needs.
- i. Inventory Augmentation:
 - Force Modernization: No retail stock fund requirements identified.
 - Force Modification: No retail stock fund requirements identified.
 - Readiness/Sustainability: Minimum amount identified for medical and subsistence contingency stocks for overseas combat units.

4. SIGNIFICANT POINTS OF INTEREST

- a. The Army Retail Stock Fund contains operating levels only for non-DSS customers at branch (installation) level. In essence, DSS customers are supplied directly from wholesale stock funds (DLA as

well as Army-managed items). Although DSS sales are washed through the retail stock fund, no inventory levels are built to support them. This supports the Army's goal to reduce intermediate stockage levels.

- b. Army Materiel Command operates a retail mobilization account which stocks only DLA/GSA items, which are classified as War Reserve. While this account is fiscally managed within the wholesale operation it procures from DLA/GSA as a retail account. Sales are made in peacetime only to fill high-priority Army requisitions which DLA/GSA cannot immediately satisfy.

OUTLINE 5. ANNEX A
ARMY RETAIL
FORSCOM DIVISION

I. PERFORMANCE DATA: (See Id. Performance)

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$112.7	\$ 118.5	\$ 122.3
- War Reserve	43.8	46.7	52.7
b. Obligation Authority			
- Operating	979.4*	1003.1	1141.2
- Peacetime Augmentation	0	0	0
- War Reserve	1.1	2.9	3.2
c. Net Sales	1006.7**	1015.3	1172.4

III. INVENTORY LEVELS (Retail):

- Recurring Requirement
Objectives: (in Days)

1. Safety Levels	14	15.5	15.5
2. Ship Time	09	7.4	7.4
3. Order Time	29	28.9	28.9
4. Operating Level	27	26.6	26.6

*NOTE: Includes O/A for DSS sales.

**NOTE: Includes sales transactions for DSS customers.

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 93.07	8.79%
- OMA	726.70	68.66
- Reserve Component	172.30	16.28
- RDT&E	2.10	.20
- Other Retail SF	3.76	.36
- Other DoD	<u>3.64</u>	<u>.34</u>
DoD Subtotal	\$1001.57	94.6%
b. Other U.S. Government	.65	.06
c. Trust Funds (FMS)	.01	.00
d. Other	<u>4.49</u>	<u>.42</u>
Total Net Sales	\$1006.72	95.11%
e. Credits	<u>51.75</u>	<u>4.89</u>
Total Gross Sales	\$1058.47	100.00%

OUTLINE 5. ANNEX B
ARMY RETAIL
USAE DIVISION

I. PERFORMANCE DATA: (See Id. Performance)

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$ 22.8	\$ 24.6	\$ 24.8
- War Reserve	53.6	72.7	91.3
b. Obligation Authority			
- Operating	147.4*	182.8	190.4
- Peacetime Augmentation	0	0	0
- War Reserve	22.5	14.0	14.4
c. Net Sales	147.6**	176.0	186.0

III. INVENTORY LEVELS (Retail):

- Recurring Requirement
Objectives: (in Days)

1. Safety Levels	21	22	22
2. Ship Time	30	31.8	31.8
3. Order Time	6	6.4	6.4
4. Operating Level	26	27.5	27.5

*NOTE: Includes O/A for DSS sales.

**NOTE: Includes sales transactions for DSS customers.

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	FY83 <u>EST ACTUAL</u>	PERCENT <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 22.22	14.50%
- OMA	119.15	77.73
- Reserve Component	0	0
- RDTE	0	0
- Other Retail SF	.02	.01
- Other DoD	<u>2.97</u>	<u>1.94</u>
DoD Subtotal	\$144.38	94.18%
b. Other U.S. Government	.16	.10
c. Trust Funds (FMS)	3.12	2.03
d. Other	<u>0</u>	<u>0</u>
Total Net Sales	\$147.66	96.31%
e. Credits	<u>5.65</u>	<u>3.69</u>
Total Gross Sales	\$153.31	100.00%

OUTLINE 5. ANNEX C
ARMY RETAIL
TRADOC DIVISION

I. PERFORMANCE DATA: (See Id. Performance)

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$ 94.8	\$ 97.5	\$ 99.4
- War Reserve	9.2	10.8	13.0
b. Obligation Authority			
- Operating	\$866.1*	\$873.2	\$894.9
- Peacetime Augmentation			
- War Reserve	1.6	.8	
c. Net Sales	835.5**	871.1	890.5

III. INVENTORY LEVELS (Retail):

- Recurring Requirement
Objectives: (in Days)

1. Safety Levels	11	10.3	10.3
2. Ship Time	7	6.6	6.6
3. Order Time	36	33.8	33.8
4. Operating Level	37	34.6	34.6

*NOTE: Includes O/A for DSS sales.

**NOTE: Includes sales transactions for DSS customers.

IV. CUSTOMERS IN FY85 (Source: FY83 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$249.86	28.62%
- OMA	458.04	52.47
- Reserve Component	98.94	11.33
- RDTE	3.4	.39
- Other Retail SF	3.16	.36
- Other DoD	<u>2.74</u>	<u>.32</u>
DoD Subtotal	\$816.14	93.49%
b. Other U.S. Government	8.09	.93
c. Trust Funds (FMS)	8.76	1.01
d. Other	<u>3.52</u>	<u>.39</u>
Total Net Sales	\$836.51	95.82%
e. Credits	<u>36.45</u>	<u>4.18</u>
Total Gross Sales	\$872.96	100.00%

OUTLINE 5. ANNEX D
ARMY RETAIL
WESTCOM DIVISION

I. PERFORMANCE DATA: (See Id. Performance)

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$11.3	\$11.8	\$12.5
- War Reserve	13.8	16.8	23.7
b. Obligation Authority			
- Operating	68.5*	80.5	80.3
- Peacetime Augmentation	0	0	0
- War Reserve	2.1	1.8	5.8
c. Net Sales	68.0**	80.3	79.8

III. INVENTORY LEVELS (Retail):

- Recurring Requirement
Objectives: (in Days)

1. Safety Levels	Data Not Available		
2. Ship Time	"	"	"
3. Order Time	"	"	"
4. Operating Level	"	"	"

*NOTE: Includes O/A for DSS sales.

**NOTE: Includes sales transactions for DSS customers.

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	FY83 <u>EST ACTUAL</u>	PERCENT <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 4.75	6.75%
- OMA	56.53	80.34
- Reserve Component	5.09	7.23
- RDTE	.05	.07
- Other Retail SF	.91	1.29
- Other DoD	<u>.20</u>	<u>.28</u>
DoD Subtotal	\$67.53	95.96%
b. Other U.S. Government	.13	.18
c. Trust Funds (FMS)	.18	.26
d. Other	<u>.22</u>	<u>.32</u>
Total Net Sales	\$68.06	96.72%
e. Credits	<u>2.31</u>	<u>3.28</u>
Total Gross Sales	\$70.37	100.00%

OUTLINE 5. ANNEX E
ARMY RETAIL
USAREUR DIVISION

I. PERFORMANCE DATA: (See Id. Performance)

II. SUMMARY BUDGET DATA (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
a. Inventory EOP			
- Peacetime	\$ 180.8	\$ 174.9	\$ 199.8
- War Reserve	416.5	550.9	670.1
b. Obligation Authority			
- Operating	1014.3*	1099.0	1052.3
- Peacetime Augmentation	0	3.0	14.6
- War Reserve	433.0	327.0	333.0
c. Net Sales	866.3**	949.2	979.0

III. INVENTORY LEVELS (Retail):

- Recurring Requirement
Objectives: (in Days)

1. Safety Levels	08	11	11
2. Ship Time	13	19	20
3. Order Time	58	51	51
4. Operating Level	26	25	24

*NOTE: Includes O/A for DSS sales.

**NOTE: Includes sales transactions for DSS customers.

IV. CUSTOMERS IN FY83 (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
a. DoD Components		
- MPA	\$ 85.6	9.23%
- OMA	657.3	70.86
- Reserve Component	0	0
- RDTE	0	0
- Other Retail SF	86.4	9.31
- Other DoD	<u>2.4</u>	<u>.26</u>
DoD Subtotal	\$831.7	89.66%
b. Other U.S. Government	.8	.09
c. Trust Funds (FMS)	26.8	2.89
d. Other	<u>7.0</u>	<u>.75</u>
Total Net Sales	\$866.3	93.39%
e. Credits	<u>61.3</u>	<u>6.61</u>
Total Gross Sales	\$927.6	100.00%

OUTLINE 6. NAVY RETAIL
BUDGET PROJECT 28 (BP-28)
FLEET MATERIAL SUPPORT OFFICE (FMSO)

1. OVERVIEW

- a. Type of Stock Fund: Retail with both intermediate and consumer levels providing support to Navy activities for consumables managed by DLA, GAS, and other Services.
- b. Categories of Stock: (BP-28) Non-Navy centrally-managed material and local procurement items.
- c. Scope of Operation:

- Activities Managing Assets: There are 68 ashore stock points (56 CONUS, 12 EXCONUS) with sufficient ADP capability to maintain local asset visibility and report semi-annually to FMSO in prescribed stratification formats. Also within the NSF there are many "non-reporting" stock points, including smaller shore-base stock points and Special Accounting Class (SAC) supply activities and ships, (including DAC 207 Aviation Ships and Marine Air Groups (AVSHIPS and MAGs); and SAC 224 Fleet Issue Ships). There are 168 shore-based activities that received obligational authority allotments from FMSO in FY84. Afloat stock points operate under open allotments.

All these activities carry consumer-level retail inventories within the retail NSF. In addition, 18 of those activities and Combat Stores Ships are authorized to carry intermediate-level retail inventories as a result of their location, proximity to fleet customers, and resupply mission to consumer-level activities.

- Inventory Control Systems:
 - Major shore-based retail (consumer and intermediate) activities used the Uniform Automated Data Processing System for Stock Points (UADPS-SP) for inventory visibility, accounting, transaction reporting, performance indicators, and requirements calculations.
 - The Shipboard UADPS (SUADPS) provides inventory control functions for automated ships.
- Stock Numbers Managed: 1.5 million (as of June 1983)
- Stock Numbers Stocked: 400,000 (NAVSUP estimate)

- Annual Issues: Requisitions/year not available. Gross customer orders for FY84 were approximately \$1.3 billion.
- War Reserves: Additive levels, funded by appropriation. Pre-positioned War Reserve Material Stocks (PWRMS) are held at stock points both ashore and afloat.

d. Performance:

- Objectives:* Point-of-entry (POE) effectiveness is the percentage of requisitions filled out of the total requisitions submitted to retail stock points. POE effectiveness goals have been set for consumer and intermediate stock points so that Average Customer Wait Time (ACWT) for Issue Priority Group I and II maintenance-related requirements (CONSUS) across all requisitions and all sources of supply is 125 hours. At intermediate retail stock points, such as the NSC's and NSD's, the POE goals for this performance level are 70 percent. At consumer stock points the POE goal is 60%. (The AWT goal outside CONUS is 135 hours.)

* NOTE: These objectives apply to all Navy activities carrying retail inventory, except for FBM subs, FBM tenders, and the TRIDENT Refit Facility in Bangor, WA, which have specially tailored performance goals.

- Actual: (Data from FY85 NSF Budget Estimate Submission (BES) for BP-28)

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u> (3rd quarter)
POE Effectiveness	61.3%	61.6%	61.7%

e. Management Structure:

- Policy: Within the Office of the Chief of Naval Operations (CNO), NSF policy is set by DCNO (Logistics) - Materiel Division (NOP-41) and the Program Planning Office - Fiscal Management Division (Navy Comptroller) (NOP-92)
- Overall Management: Naval Supply Systems Command (NAVSUP), subject to NAVMAT oversight.
- Intermediate Control: Fleet Material Support Office (FMSO) Mechancisburg, PA. FMSO provides policy guidance, assistance, and is responsible for the daily financial management of BP-28.
- Daily Operations: over 150 retail stock points worldwide with monthly reports back to FMSO.

f. Summary Budget Data (Source: FY85 BES for BP-28) (\$ in Millions):

	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
1) Peacetime Inventory EOP			
Peacetime	834.2	923.5	1018.7
Mobilization	199.5	248.0	276.7
2) Obligation Authority			
Operating	1350.8	1452.4	1570.0
Augmentation	-0-	7.5	-0-
Mobilization	47.1	7.9	34.9
3) Net Sales	1263.1	1331.4	1450.6
4) Inventory Turnover (Sales ÷ Peacetime Inventory)	1.5	1.4	1.4
6) Credits from Wholesale	19.0	40.1	42.0
7) Numeric Stockage Objective	100.3	186.3	165.8
8) Other Load List Objectives, MLSF Objectives, and AVSHIP/ MAG Objectives	350.6	401.5	454.8

2. INVENTORY MANAGEMENT

- a. Stockage Criteria: This subsection describes the Navy's retail stockage criteria for BP-28 materiel, which at the wholesale level is managed by DLA, GSA, or some other non-Navy source.

BP-28 materiel is "pulled" to retail stock points based on a variety of retail range and depth models. The parameters for these models are defined and set by FMSO, but subject to local adjustment. Stocked items are classified as demand-or non-demand-based depending on whether they pass range test. Items that fail a range test but are still stocked are called non-demand-based items.

- Provisioning: Retail consumer level initial provisioning for new weapon systems (usually in a two-year demand development period) is controlled by Program Support ICP's within the Navy's Aviation Supply Office (ASO) or Ships Parts Control Center (SPCC), who establish allowance lists for new systems, incorporating both Navy-and-non-Navy-managed supplies. FMSO is not involved in initial provisioning; ASO and SPCC pass Supply Support Requests (SSR's) directly to non-Navy wholesalers.
- Demand Based: For replenishment, demand-based levels at retail stock points are computed by UADPS-SP for automated, (intermediate and consumer), shore-based stock points, or SUADPS for automated ships and MAGs.

-- UADPS-SP: The UADPS-SP system utilizes an Economic Range Model (ERM) for range calculations, and a Variable Operating and Safety Level (VOSL) Requisitions Short Model (RSM) for depth calculations. VOSL is designed to conform to RIMSTOP (DODI 4140.45). ERM incorporates cost-to-stock versus cost-to-not-stock considerations, but goes beyond such "COSDIF" DoDI 4140.42 criteria to consider workload and maximum range constraints as well. In ERM, POE effectiveness objectives serve as the basis for range constraints, rather than pure cost-to-stock/not stock criteria. ERM is relatively new, and as it is implemented a "safety net" of three demands in six months is being applied to reduce the number of changes ERM causes in stockage lists. Subject to local adjustments, VOSL depth is computed to satisfy a net effectiveness objective (i.e., fill rate for stocked items) that is related to the overall POE effectiveness goal. FMSO sets parameters for the VOSL depth model.

-- SUADPS: SUADPS employs a "fixed-level" type range and depth model, in which the type commanders operating under OPNAV (OP-41) policy, decide what and how much to stock. Two demands per six months and at least one demand per six months thereafter generally qualifies an item to be a demand-based item (DBI) that is stocked. Depth in SUADPS is determined by selected factors for safety level, order and ship time level, and operating level (order quantity).

- Non-Demand Based: Non-demand-based items are either insurance items (items that do not fail in normal usage) or Numeric Stockage Objective (NSO) items (items with demands too low to pass a range test), that are stocked because lack of the item would seriously impair operation of a weapon system. Non-demand based stockage can also include "one-time" requirements for support of non-recurring programs and life-of-type buys.

b. Materiel Visibility: Although FMSO is the primary manager for the retail NSF, FMSO does not have day-to-day line-item visibility of assets at retail stock points. FMSO does get line-item asset visibility twice a year when stratification reports are submitted. FMSO also receives a monthly Financial Inventory Report (FIR) from each retail activity providing dollar summaries of inventories, receipts, issues, returns, disposals, and other inventory transactions.

c. Sources of FMSO stocks (as of June 1983) (Source: FY85 BES):
(Note: A dollar breakout was not available in the BES. The table below is in terms of number of line items rather than by dollars.)

	<u>No. of Line Items</u>	<u>Percent of Total No. of Line Items</u>
1) DLA (five centers)	1,414,788	91.9%
2) GSA	30,092	1.9%
3) Air Force, Army, Marine Corps	93,897	6.2%

- d. Inventory Levels (in days) (Source: FY85 BES, SF-2, requested, as opposed to funded, levels):

	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>
1) Safety Level			
Item stratified activities			
(e.g., UADPS)	48	49	49
Statistically stratified			
activities (e.g., SUADPS)	23	23	23
2) Retail Order + Ship Time (OST)			
Item stratified	52	51	50
Statistically stratified	44	44	44
3) Procurement Cycle			
(1/2 Operating level)			
Item stratified	32	32	32
Statistically stratified	31	31	31
4) Numeric Stockage Objective			
(\$ in millions)	100.3	135.6	165.4
5) Afloat (SAC 207/224) MLSF			
(\$ in millions)	92.5	98.8	108.8
6) AVSHIPS/MAGs (\$ in millions)			
	194.3	218.6	245.2
7) Other Stockage			
Objectives	121.8	128.4	135.4

3. FINANCIAL MANAGEMENT

- a. Budget Process: NSF budgets are prepared for each Budget Project. The retail NSF includes BP-28 and BP-38 (retail bulk fuels).

- Budget Estimate Submission (BES):
 - Prepared by FMSO, based on item and statistical stratification (in August) of requirements and assets from Navy retail stock points worldwide.
 - Reviewed by NAVSUP, NAVMAT, NAVCOMPT (OP-92), and CNO (OP-41) for submission to OSD Comptroller.
 - Apportionment and Mid-Year Reviews: Done routinely each year based on September and March stratifications. Process similar to BES.

- b. Approved Program:

- NAVSUP receives SF 1105 obligational authority for entire NSF from OSD Comptroller (via SECNAV, NAVCOMPT, CNO and NAVMAT channels), and, as budget activity administrator, suballocates O/A and commitment authority to each Budget Project manager.

- FMSO, as manager for BP-28 and BP-38, distributes approved O/A, along with Public Law R.S. 3679 responsibility, among Navy retail stock points by means of an Allotment/Suballotment Authorization (NAVCOMPT Form 372).
 - Afloat, stock-funded ships and some smaller shore-based stock points do not receive specific allotments from FMSO but are authorized to cite a FMSO centrally-managed "open" allotment for their transactions with DLA and other wholesalers. All other stock points receive and must operate under specified (fixed) O/A allotments from FMSO. Both open and specific allotments flow directly from FMSO to the stock points:
 - NAVSUP maintains control of O/A by review of FMSO reports of progress against plan. FMSO in turn monitors stock point activity by means of Financial Inventory Reports (FIRs) (described in subsection 2b.) and Status of Fund Authorization-Stock Fund Reports, which provide information on authorization, commitments, obligations, accounts payable, and disbursements. Both reports are submitted monthly and cover the prior month's activity.
 - FMSO maintains central control and visibility of appropriated Prepositioned War Reserve Materiel Stocks (PWRMS).

c. Cash Management:

- Although each Budget Project in the NSF has a separate identity in the NAVSUP budgeting system, sales and cash accounting are not broken out by BP, and only total NSF cash is managed to a specific number of days.
- Public Law 31 USC 1517 responsibility for cash is retained by NAVSUP.
- The Navy Regional Finance Center (NRFC) in Washington, D.C., provides centralized bookkeeping for FMSO via the Fleet Accounting and Disbursing Centers (FAADC's) located on each coast.

d. Pricing:

- DLA items are sold at standard prices set by DLA, which include a retail loss allowance (0.5%) rebated by DLA to the retail NSF. Prices are stabilized (by DLA).
- GSA items: Beginning 1 October 1983, the Navy is applying a 15.5% price stabilization factor to items managed by GSA, to be applied annually.
- Local Purchase: In April 1983 the Navy initiated a 15% surcharge on items purchased locally (to reimburse the retail stock fund for inventory losses).

NOTE: The above represent all the surcharges applied in the retail NSF for BP-28.

e. FMSO Customers in FY83 (SF-6 BP-28 reimbursable issues)
(Source: FY85 BES) (\$ in Millions):

	<u>FY83</u>	<u>Percent of Gross Sales</u>
1. DoD Components		
- O&M Marine Corps	7.7 M	.6%
- RDT&E Navy	.5	--
- Military Pers. Navy	145.6	11.4
- Aircraft Procurement Navy	.1	--
- Shipbuilding & Conversion Navy	7.0	.5
- O&M Navy	878.1	68.6
- O&M Navy Reserve	13.1	1.0
- Other Procurement, Navy	.1	--
- Navy Stock Fund	.2	--
- Navy Industrial Fund	191.5	14.9%
- Army	--	--
- Air Force	--	--
- All Other DoD	--	--
DoD Sub-Total	\$1,243.9 M	97.1%
2. Other Federal Agencies	2.1	.2
3. Trust Funds (FMS)	.1	--
4. Other	<u>17.6</u>	<u>1.41.4</u>
Total Net Sales	\$1,263.7 M	98.7%
5. Credits to Customers	<u>16.6</u>	<u>1.3</u>
Total Gross Sales	\$1,280.3 M	100.0%

f. Inventory Maintenance: The Navy is proposing a surcharge on Navy-managed items in FY85 to offset retail operating inventory costs of \$65 million to \$75 million/year, incurred through the addition of items to local inventories (when usage indicates a demand frequency of three in six months) under "range maintenance" programs ashore and afloat. There is no inventory maintenance surcharge on BP-28 retail items.

g. Requisitioning/Financial/Credit Procedures:

- Customer Obligations: Customers obligate their O&M or Industrial Fund dollars when they place their requisitions.
- Customer Backorders: Local backorders are not issued in the retail NSF. Instead, requisitions are passed up. Precise procedures at retail supply points for handling a customer requisition that cannot be filled depend on whether the item is stocked at the supply point or not.

- Not-In-Stock (NIS). A requisition for an NIS item is passed to the next higher supply echelon (intermediate or whole-sale), but is "washed" financially through the retail NSF. In the case of an NIS requisition passed to DLA, for example, the NSF will obligate itself to pay for the materiel upon receipt by the customer. If the pass is to a Navy intermediate supply point, the wash is an Other Supply Officer (OSO) transfer within the NSF, (with billing to the customer by the point-of-entry stock point).
- Not Stocked (NS) items are items which are not on the retail supply point's stockage list. Requisition for NS items are also passed up directly, but with the customer's O/A attached. That is, there is no wash through the retail NSF of a requisition for an NS item.
- In both cases, NIS and NS, passed requisitions will not be automatically filled at the POE stock point upon receipt of replenishment assets arriving under other requisitions. Instead customers will wait until their passed requisitions are filled. Periodically, however, assets are compared to outstanding requisitions, and any passed requisitions that are filled or cancelled.
- Customer Materiel Returns for Credit:
 - Customers receive credit from the retail NSF only for stocked items at or below the retail requisitioning objective. Customers can also get credit from DLA/GSA directly. In this case the retail site notifies the customer of credit, but the credit is not washed through the NSF.
 - Customer returns for retail credit were \$16.6 million in FY83, \$17.5 million in FY84, and projected at \$18.3 million for FY85. These figures compare to total customer returns for these years worth \$49.8 million, \$56.3 million, and \$59.0 million.
- Materiel Returns to Wholesalers for Credit:
 - The retail NSF received credits for returns to wholesalers of \$19.0 million in FY83, \$40.1 million in FY84, and \$42.0 million projected for FY85. These amounts compare to the value of all returns to wholesale (with and without credit) amounting to \$55.6 million in FY83, \$58.2 million in FY84, and zero dollars projected for FY85.
- h. Inventory Augmentation: In the FY85 BES, there was a request for \$7.5 million in FY84 for inventory augmentation, in the readiness-and-sustainability-improvement category, for "range maintenance" improvements.

4. POINTS OF INTEREST

- a. A special characteristic of the retail NSF in the area of inventory management, distinguishing the NSF from operations in the Army and Air Force retail stock funds, is the existence of two supply echelons under the retail umbrella -- intermediate and consumer echelons.
- b. In the area of financial management, the use of open allotments for ship-based stock points is unique to the NSF.
- c. Although FMSO is the designated Navy Retail Office for "9-Cog" (non-Navy-managed) materiel, retail initial provisioning is essentially managed by PSICP's within ASO and SPCC, who decide on all items to be included on provisioning stockage lists. After initial provisioning, that is, in replenishment -- FMSO does control the parameters applied in the range (ERM) and depth (VOSL) retail models.
- d. NAVSUP Pub OI-0530-LP-553-0000, Inventory Management, A Basic Guide to Requirement Determination in the Navy, contains a wealth of information on both wholesale and retail operations in the NSF. For retail operations only, the FMSO Publication, "Retail Management -- A Guide to Control of the Retail Function," provides details on retail financial and inventory management systems, policies, and procedures.

OUTLINE 7. AIR FORCE
GENERAL SUPPORT DIVISION (GSD)

1. OVERVIEW

- a. Type of Stock Fund: Retail.
- b. Categories of Stock: Non-Air Force centrally managed, (e.g., GSA, DLA, Army, Navy), local manufacture (LM), and local purchase (LP) consumables (predominately Class IX).
- c. Scope of Operation:
 - Activities Managing Assets: Retail supply activities at over 300 locations worldwide.
 - Inventory Control System: Most activities use the AF Standard Base Supply System (SBSS). Air Logistics Centers use the D033 Stock Control and Distribution System. Both are random access/real-time update systems.
 - Stock Numbers Managed: 1.2 million.
 - Stock Numbers Stocked: 350,000 (estimate).
 - Annual Issues: 9.0 million.
 - War Reserves: Additive levels, funded by appropriation and maintained at retail level in addition to peacetime levels and assets.
- d. Performance:
 - There are no overall performance effectiveness goals in written supply policy documentation. However, for CONUS bases item safety levels are set to provide 84% probability that all demands in resupply cycle are met; 97% for selected weapon system items overseas. (Note: This is different from a fill rate objective in that only the resupply period is addressed; with such objectives, implicit fill rate objectives will be higher.)
 - Actual: (Data derived from SBSS and does not include retail performance at ALC's):
 - Issue Effectiveness (stocked and non-stocked)

<u>FY81</u>	<u>FY82</u>	<u>FY83</u>
65.9%	68.5%	69.3%

-- Stockage Effectiveness (stocked items only)

<u>FY81</u>	<u>FY82</u>	<u>FY83</u>
85.3%	87.8%	88.8%

e. Management Structure:

- Policy: HQ USAF (Comptroller and DCS Logistics).
- Overall Management: GSD Manager, HQ AFLC (Materiel Management).
- Intermediate Control: 17 Major Commands.
- Daily Operations: Five Air Logistics Centers (ALCs) and approximately 300 Air Force activities worldwide.

f. Summary Budget Data (Source: FY85 BES) (\$ in Millions):

	<u>FY83</u> <u>EST ACT</u>	<u>FY84</u> <u>REV PROP</u>	<u>FY85</u> <u>BUD EST</u>
1) Peacetime Inventory EOP			
Peacetime	536.0	715.5	826.5
Mobilization	115.8	158.1	198.6
2) Obligation Authority			
Operating	1,919.7	2,043.8	2,220.5
Augmentation	0	178.0	19.1
War Reserve	40.0	26.1	36.2
3) Net Sales	1,787.0	1,920.0	2,083.7
4) Net Customer Orders	1,798.1	1,945.2	2,074.4
5) Inventory Turnover (Sales ÷ P/Time Inventory)	3.33	2.68	2.52
6) Credits from Wholesale	78.5	78.0	81.7
7) Numeric Stockage Objective	112.0	183.0	215.8

2. INVENTORY MANAGEMENT

a. Stockage Criteria:

- Demand-Based:
 - Range: Levels computed when cost-to-stock less than cost-not-to-stock. Exceptions: automatically sets stock levels on:
 - 1) An item causing a Not-Mission-Capable condition on an end-item.
 - 2) Bench stock item.
 - 3) Number of demands in 365 days \geq 12.
 - Depth: Safety levels set to provide certain probabilities that all demands in resupply cycle are met, (as described in Section 1d above). This is not a cost minimization, back-order constraint model as specified in DoDI 4140.45.
 - Range and depth computed on SBSS at each retail site.
- Non-demand Based:
 - Known as special levels, representing approximately 27% of total gross level requirements in FY85 BES.
 - Initial Spares Support Lists (ISSLs), supporting specific weapon systems, are developed by ALC System Managers. Commands direct bases to load ISSLs. A form of base level "provisioning", ISSL levels represent 45 percent of GSD special levels.
 - Life Cycle Retention Levels (28 percent) -- largely in support of communication and electronic equipment.
 - Other base initiated special levels (27 percent) -- mostly in support of communication, vehicle, and installation maintenance activities.

b. Materiel Visibility:

- Visibility of assets above individual retail supply points is limited to a Stock Number User Directory (SNUD) on microfiche - updated monthly, reconciled annually.
- The SNUD lists each Air Force activity that is a registered user of a specific stock number.
- Assets are transferred between activities on a negotiated basis.

c. Sources of GSD Stocks (in FY83):

	<u>\$ Millions</u>	<u>Percentage</u>
1) DLA (five centers):	352	45
2) GSA (ten regions):	278	15
3) Other (Army & Navy):	121	06
4) Industry (commercial LM&LP):*	630	34
	<u>\$1,881</u>	<u>100%</u>

* NOTE: Procurement from industry includes GSA Federal Supply Schedule items (e.g., office and family housing furniture, appliances, some ADP supplies, and ADP hardware). Non-GSA items such as coal, hot mix, and other base engineering bulk materials are also included.

d. Inventory Levels (in days) (Source: Exhibit SF-3, FY85 BES):

	<u>FY83 EST ACT</u>	<u>FY84 REV PROP</u>	<u>FY85 BES</u>
1) Safety Level	19	23	25
2) Retail O&ST	21	23	24
3) Operating Level	27	36	39
4) (Repair Cycle)	<u>(4)</u>	<u>(4)</u>	<u>(4)</u>
Ave Funded Invest Lvl (SL + OST + OL/2)	54	64	69

3. FINANCIAL MANAGEMENT

a. Budget Process:

- Budget Submission (BES):
 - Developed by: GSD Manager, WPAFB based on major command consolidation of base inputs.
 - Reviewed by: HQ USAF/Logistics
HQ USAF/Comptroller
 - Approved by: HQ USAF/Comptroller for submission to OSD.
- Apportionment and Mid-year Review:
 - Developed by: HQ USAF/Comptroller with GSD Manager, WPAFB and HQ USAF Logistics input.

-- Reviewed by: HQ USAF/Logistics
HQ USAF/Comptroller

-- Approved by: HQ USAF/Comptroller
All SF 1105 requests are reviewed and approved by SEC AF
(Financial Management).

b. Approved Program:

- HQ USAF/Comptroller receives SF 1105 from OSD Comptroller channels.
- HQ USAF/Comptroller forwards Approved Program (letter format) with Public Law RS 3679/31 USC 1341a responsibility for obligations to GSD Manager, WPAFB.
 - Letter specifies division operating constraints (e.g., not-to-exceed Order-to-Sales ratios, On Hand Inventory values, and Obligation Authority).
- GSD Manager reviews and breaks out approved program and forwards to commands for dissemination to bases. Operating constraints similar to above are also provided. Public Law RS 3679/31 USC 1341a responsibility for obligations is retained by the GSD manager and not passed down to major commands and bases.

c. Cash Management:

- GSD cash has separate identity in the accounting system but only total Air Force stock fund cash is managed to a specific number of days.
- Public Law 3679/1341a responsibility for cash management is retained by AF/Comptroller.
- AF Accounting and Finance Center, Denver provides bookkeeping services based on daily/monthly base updates via AUTODIN.

d. Pricing:

- DLA items: Uses Standard Price, calculated by wholesaler. Includes a retail loss allowance, price is stabilized.
- GSA items (Stores Catalog only). Reprice to latest receipt, price is not stabilized.
- Local Purchase/Manufacture and GSA Federal Supply Schedule items: Last price charged by vendor (plus an 8.6 percent surcharge in FY83); price is not stabilized.

-- GSD surcharge:	Transportation	4.0%
	Inventory Loss	1.8%
	Obsolescence	<u>2.8%</u>
	Total	8.6%

- e. GSD Customers in 1983 (Source: Exhibit SF-6, FY85 BES)
(\$ in Millions):

	<u>FY83</u> <u>EST ACTUAL</u>	<u>PERCENT</u> <u>GROSS SALES</u>
1) DoD Components		
- Procurement (Acft, etc.)	\$ 7.2 M	.4%
- O&M (Active, Guard, & Reserve Bases)	1,334.0	72.2
- Depot Maint Ind Fund	293.0	15.9
- Other Ind Funds (MAC)	90.3	4.9
- Family Housing	29.5	1.6
- Army	4.0	.22
- Navy	1.0	.06
- Grant Aid	.4	.02
- Other DoD	18.9	1.0
DoD Sub Total	(\$1,778.3)	(96.3%)
2) Other Agencies (NASA, DoE)	.6	.03
3) Trust Funds (FMS)	3.2	.17
4) Other	4.9	.26
Total Net Sales	(\$1,787.0)	(96.76%)
5) Credits (to Customers)	<u>59.8</u>	<u>3.24</u>
Total Gross Sales	\$1,846.8 M	100.0%

- f. Inventory Maintenance:

- Unprogrammed level increases are funded.
 - Largely through credits from GSD returns of material to the wholesaler (see credit discussion in paragraph "g").
 - Much lesser degree by customer non-credit returns resulting in subsequent sales.
- Programmed increases are funded by inventory augmentation.

- g. Requisitioning/Financial/Credit Procedures

- Customer Obligations:
 - Prior to 1 October 84, major customer (O&M/Industrial Fund) funding was obligated when materiel was issued.
 - After 1 October, funding will be obligated when the materiel is requested.

- Customer Backorders:
 - Requests for materiel that is not-in-stock or is not-stocked are backordered at the local level. All non-stocked and selected (high priority) not-in-stock requirements are passed to the wholesale system on locally procured.
 - All requisitions passed to the wholesale system cite stock fund obligation authority.
 - The customer backordered requirement is issued from the earliest receipt of materiel -- either normal stock replenishment or the requisition for the specific backordered requirement.
- Customer Materiel Returns for Credit:
 - Customer O&M/Industrial funds are credited only for materiel returns resulting in retail balance \leq item Requisition Objective (levels plus backorders).
 - GSD Retail activities provided approximately \$59.8 million in credits to customers in FY83.
- Retail Stock Point Requisitions:
 - Replenishment Requisitions: GSD funds are obligated at base level. AFAFC/Denver financial records are updated monthly by base inputs via AUTODIN.
- Retail Stock Materiel Returns for Credit:
 - Base reports excess items; if wholesaler grants credit materiel is returned and credited directly to the base GSD.
 - Wholesalers provided GSD stock points approximately \$78.5 million in credits for material returns during FY83 (FY83 estimated column of FY85 BES).
- Retail Stock Point Inventory Adjustments: Accounting records as of 30 September 1983 reflect a \$5.3 million net loss for FY83 Physical Inventory Adjustments.

h. Inventory Augmentation:

- Force Modernization:
 - Identified in POM and in budget Exhibit SF-3A (FY85 BES)
 - Mostly special levels loaded at retail such as Initial Spares Support List (ISSL) items in support of new weapon systems.

- Force Modification:
 - Identified in POM and in budget Exhibit SF-3A (FY85 BES) by weapon system, e.g., C130 airframe modification.
 - Provides follow-on supply support resulting from depot level modification. Generated by System Managers and forwarded directly to GSD Manager for inclusion in BES.
- Readiness/Sustainability:
 - Identified in POM and in budget Exhibit SF-3A (FY85 BES).
 - Initiatives to improve supply support.
 - A recent example is the implementation of RIMSTOP that resulted in increased safety levels. The implementation of RIMSTOP has increased inventories by \$63 million.

4. POINTS OF SIGNIFICANT INTEREST

- a. The GSD is a sales based division with only two types of levels: demand-based levels and Numeric Stockage Objective levels (latter includes ISSIs and other special levels).
- b. The GSD addressed inventory augmentation in the FY85 BES. Exhibit SF-3A provides detailed breakouts of Force Modernization, Force Modification and Readiness/Sustainability initiatives for FYs 83,84, and 85. However, the FY85 BES levels statement, Exhibit SF-3, does not clearly differentiate inventory augmentation requirements from normal operating requirements. (The GSD transition from stratification to budget does not separate inventory augmentation requirements previously identified as replenishment). As a result, inventory augmentation is included in the Exhibit SF-3 levels statement in the Numeric Stockage Objective, (Line F5), and the safety, operating, O&ST, and repair levels (Lines F1-F4) and cannot be separated from the normal peacetime operating portion of these levels.